

noranda

1991 Annual Report

Competitiveness

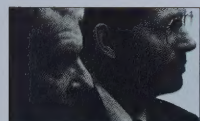
Financial Strength

Environmental Compatibility





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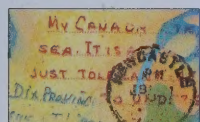
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Report features Noranda products

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A profile of our natural resource company

Group

Profile

Major Operating Businesses*

Mining and Metals



The Mining and Metals group is comprised of:

Noranda Minerals — an integrated base and precious metals mining, smelting and refining group. More than 17,000 people are employed at the company's 28 mines and 10 metallurgical operations.

Noranda Aluminum — smelts aluminum and produces a wide range of downstream products. The group employs 5,800 people at 12 manufacturing plants.

Wire Rope Industries — manufactures steel wire rope, and employs 700 people at two manufacturing plants and 18 distribution centres.

1991 sales: \$3.8 billion

Noranda Minerals Inc.

Brenda Mines Ltd. (69%)

Brunswick Mining and Smelting Corporation Limited (64%)

Falconbridge Limited (50%)

Hemlo Gold Mines Inc. (46%)

Kerr Addison Mines Limited (51%)

Louvem Mines Inc. (53%)

Minnova Inc. (50% owned by Kerr Addison)

Rudolf Wolff & Co. Ltd.

Noranda Aluminum, Inc.

Noranda Primary Aluminum

Norandal USA, Inc.

Norandex Inc.

American Racing Equipment, Inc.

Wire Rope Industries Ltd. (90%)

Forest Products



Noranda Forest is Canada's largest producer of forest products. The company operates 10 pulp and paper mills, 18 sawmills, 14 panelboard mills, three paperboard mills and 10 corrugated container plants. Almost 22,400 people are employed at the company's operations.

1991 sales: \$4.1 billion

Noranda Forest Inc. (82%)

Fraser Inc.

Island Paper Mills Company (75%)

James MacLaren Industries Inc.

Northwood Pulp and Timber Limited (50%)

MacMillan Bloedel Limited (49%)

KNP (30% owned by MacMillan Bloedel)

Noranda Forest Recycled Papers

Norbord Industries Inc.

Oil and Gas



Noranda's Oil and Gas group is made up of three companies that produce natural gas, natural gas liquids and oil; market natural gas; distribute propane; and develop, own and operate cogeneration facilities. Noranda's Oil and Gas group is one of Canada's largest in terms of natural gas and oil reserves. The group employs 4,300 people, primarily in Western Canada.

1991 sales: \$1.3 billion (combined)

Canadian Hunter Exploration Ltd.

Norcen Energy Resources Limited (33%)

Superior Propane Inc. (100% owned by Norcen)

North Canadian Oils Limited (51%)

*100% owned unless otherwise noted

Principal Locations

Canada
United States
Dominican Republic
Norway
Zimbabwe
Mexico
Guinea

Sales and exploration offices
around the world

Major Products

Zinc
Copper
Nickel
Lead
Gold
Silver
Sulphuric acid
Potash
Aluminum ingot
Aluminum sheet
Aluminum foil
Automotive wheels
Vinyl siding
Steel wire rope

End-use Products



Some end uses for materials produced by the Mining and Metals group include: zinc in automotive parts, copper in circuit boards, lead in batteries, nickel in cutlery, precious metals in jewellery, silver in photographic film, aluminum in household foil and wheels and structural wire rope for suspension bridges.

Canada
United States
United Kingdom
Netherlands

Sales offices around the world

Pulp
Fine paper
Groundwood paper
Newsprint
Paperboard
Panelboard
Boxboard
Lumber
Recycled paper



End-use products include: newspapers, magazines, telephone directories, books, building materials, specialized wood products such as Parallam® and packaging materials.

Canada
United States
Offshore:
Australia
Gulf of Mexico
Malaysia
Indonesia
Egypt
Argentina

Natural gas
Natural gas liquids
Crude oil
Propane



Natural gas is used primarily as a heating fuel, propane powers vehicles and oil is converted into various fuels such as heating oils, gasoline and jet diesel. Oil is also a base in many products including plastics, chemical and building products.

The current recession has been

1991 was a difficult year for Noranda in terms of financial performance. While we expected lower earnings and cash flow than in 1990, we did not

production capacity for many of our products meant that supply exceeded demand and commodity prices were weak. At the same time, the

Report to Shareholders



Alfred Powis, Chairman (left) and David Kerr, President and Chief Executive Officer.

Group Earnings

(\$ millions)	1991	1990
Mining and Metals	66	301
Forest Products	(75)	16
Oil and Gas	11	59
	2	376
Cost of borrowing and corporate expense, net of investment income and gain on the sale of assets	(135)	(256)
Earnings (loss)	(133)	120

anticipate the severity of the downturn. Noranda incurred a loss of \$133 million or \$1.04 per share as compared with 1990 earnings of \$120 million or 36 cents per share.

The current recession has proven to be longer and deeper than most had predicted. While several faint signs of recovery at mid year gave us hope that the worst was behind us, economic conditions did not improve in any material fashion. The fall in interest rates lowered Noranda's borrowing costs substantially, but excess worldwide

continued high level of the Canadian dollar relative to the U.S. dollar adversely affected our international competitive position.

In this environment, the focus of management throughout the Noranda Group of companies has been on cash conservation and cost containment. Specific initiatives have included the sale of non-core assets, permanent and temporary closure of selected operations, production cuts, capital expenditure deferrals and a wide variety of cost-saving initiatives. While these initiatives address the short-term imperatives, they will also improve the competitiveness of our Group on a long-term basis. This subject is explored in more depth in the "Competitiveness" section of this report, beginning on page 8.

1991 was a year of significant change at the senior level of our Group companies. Eight new presidents have assumed the challenge of leading their companies through what we believe will be a very turbulent period. We have a high degree of confidence in these new

longer and deeper than predicted.

leaders. Their fresh ideas and approaches will be critical to our success.

Operating Results With the sale of Canada Wire and Cable during the past

olders

year, our major stand-alone manufacturing asset is gone. Accordingly, we are now reporting Noranda's results in three groups instead of the previous four. The three groups are: Mining and Metals, which now includes Noranda Aluminum and Wire Rope Industries, Forest Products, and Oil and Gas. This change is intended to simplify the picture of Noranda for our external audiences.

The operating earnings of the Mining and Metals group for 1991 were \$66 million as compared with \$301 million in 1990. The principal reason for the decline was lower prices for all of our key products including copper, zinc, nickel and aluminum. In addition, a 10-month strike at the Brunswick mine was resolved only at mid year.

The Forest Products group reported an operating loss of \$75 million for 1991 as compared with a profit of \$16 million in 1990. Lower selling prices for pulp, newsprint and lumber were part of the problem. Reduced sales volumes of newsprint, panel products,

groundwood papers and fine paper accounted for most of the balance of the decline. Reduced operating rates, as a result of voluntary production curtailments to meet demand conditions, resulted in higher unit operating costs.

The Oil and Gas group contributed operating earnings of \$11 million, down from \$59 million in 1990. This decline was the result of lower prices for both natural gas and crude oil. A 6%

Financial Highlights

(\$ millions - except per share data)	1991	1990	1989	1988	1987
Revenue	8,460	9,565	9,325	8,858	7,366
Earnings (loss)	(133)	120	442	603	343
Cash from operations	530	1,007	1,352	1,328	845
Earnings (loss) per common share	\$(1.04)	0.36	2.19	3.14	\$2.14
Dividends per common share	\$ 1.00	1.00	1.00	0.90	\$0.57
December 31					
Working capital	1,849	2,014	2,278	1,979	1,884
Long-term debt	4,541	4,522	3,805	1,970	1,706
Capital sources	6,641	6,998	6,828	6,313	5,388

increase in natural gas production and increased revenue from the brokering of natural gas were insufficient to avoid the earnings decline.

Noranda's cost of borrowing and corporate expense net of investment income and gain on asset sales fell from \$256 million to \$135 million, despite higher debt levels. This decline was the result of significantly lower interest rates in 1991 compared to 1990 and the inclusion in 1991 of an after-tax gain of \$78 million on the sale of assets, principally Canada Wire and Cable.

In 1991, Noranda paid a common share dividend of \$1.00 per share, notwithstanding the absence of earnings. We believe common share dividends are an integral part of the cost of equity capital and every effort should be made to pay a common share dividend through good times and bad.

The Management Discussion and Analysis section of this report, starting on page 22, provides detailed reviews of the three operating groups and an analysis of Noranda's liquidity and capital reserves.

Corporate Vision and Strategies

Noranda remains firm in its vision to be the premier diversified natural resource company. As in past annual reports, we have outlined the strategies we are following to achieve this objective. They are presented in three sections: Competitiveness, Financial Strength and Environmental Compatibility.

In difficult times such as we are now experiencing, it is tempting and all too easy to abandon vision and longer term goals and focus exclusively on the immediate future. Such an approach in natural resource businesses is likely to mean that a company may have no future. In our businesses, longer term investments through exploration, research and capital projects are essential to ensure that the company can achieve its objectives. In this context,

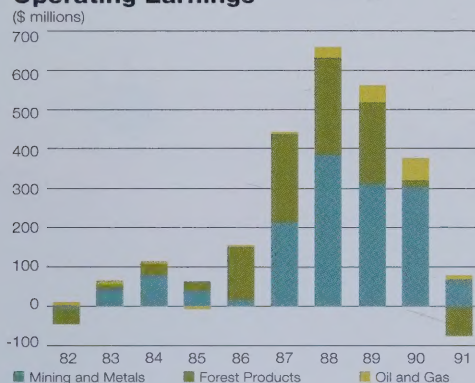
while capital spending has been curtailed throughout the Group, we continue to invest in mineral and oil and gas exploration and in technology and projects to improve our competitiveness and environmental compatibility.

In addition to facing the short-term challenges, many of our business units invested a great deal of time and effort during the past year in planning processes that will enable them to be positioned competitively for the future. In particular, Noranda Forest, MacMillan Bloedel, Noranda Minerals, Falconbridge, North Canadian Oils and Canadian Hunter have developed new strategic statements and plans that have the strong support of Noranda.

Canada At the time of writing last year's report, the major concern was the hostilities in the Middle East. The war was over quickly, but proved to be only one of several major international events during the year. The enormous changes in Eastern Europe and the disintegration of the Soviet Union were watershed events that had and will continue to have unexpected and immediate impacts on many of our businesses, particularly nickel and aluminum.

1992 will be a year to focus on Canada. The risk that our country will no longer exist as we know it is substantial. From both the economic and emotional perspectives, Noranda

Operating Earnings

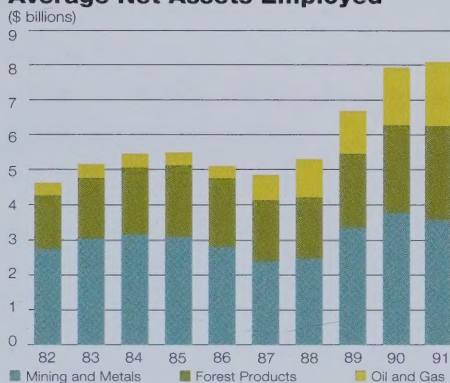


has strongly supported Canadian unity, and will continue to do so. We recognize the need for change in our constitution and in the sharing of powers as the only way to make sure that all Canadians can feel at home in their country. Because this issue is of such importance, we have devoted a section of this report to Canada, beginning on page 18.

Outlook We believe recovery from the recession will continue to be slow and painful. Our 1992 plan is based on an economic forecast that anticipates a fragile world economy which is not expected to show much improvement until the second half of the year. Downward pressure on interest rates should continue for most of the year, and we foresee some weakening in the value of the Canadian dollar. Both of these will be positive for Noranda.

For the products whose prices have fallen during 1991, we believe the bottom has been reached. There is, however, no strong evidence to suggest

Average Net Assets Employed



that conditions are yet in place for substantial increases in demand and the accompanying increased operating rates and prices. The expected improvement in economic conditions by late 1992 should set the stage for a reasonable recovery in 1993.

In this context, we expect 1992 to be essentially a break-even year for the Company, with a return to profitability in 1993. We will continue to maximize cash flows and contain debt. The ongoing process of assessing all of our assets in terms of their ability to deliver acceptable rates of return over time will also continue.

Noranda people have proven their competence and commitment during an extremely difficult year. We are proud of all of them. We believe that our business strategies coupled with the hard work, enthusiasm and creativity of our employees will position us to be among the leaders when we move into better times.

On behalf of the Board,

Alfred Powis, Chairman

David Kerr, President
and Chief Executive Officer

Toronto

February 10, 1992

Competitiv



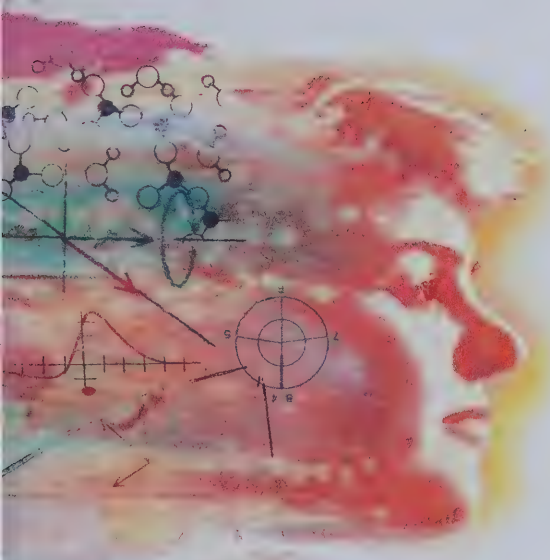
Continuously improving Noranda's competitiveness depends on success in three key areas: assets, technology and people.

Canadian competitiveness captured headlines during 1991. From being the concern of individual companies and industries, competitiveness became a national issue. The impact of the recession, particularly with respect to job loss and plant closures, has highlighted the need for major corporations to achieve international standards with respect to both quality and cost if they are to survive, much less thrive. The study of

Canada's competitiveness undertaken by Michael Porter of Harvard University and the Federal Government's prosperity initiative both underscore the critical need for Canadian industry to improve its performance relative to the rest of the world.

Continuously improving our competitive performance depends on our success in three key areas: assets, technology and people.

ness



Assets The tough economic times and our emphasis on achieving acceptable rates of return have led all of our business units to assess the long-term viability of their assets. Our objective is to make sure that we own the best quality natural resource assets. By "best quality" we mean assets that provide, or have the potential to provide, acceptable rates of return on a full cycle basis, taking into account both annual earnings and increases in the underlying value of assets. If we are to maintain an adequate level of ongoing investment

in our businesses, then we must address the issue of underperforming assets. This means that some operations must be managed to produce maximum cash flow or be sold or shut down.

In 1991, important steps were taken in the initial, but often painful, process of asset rationalization. Within Noranda Forest, the Atholville pulp mill has been temporarily closed. A number of sawmills and other building materials plants have been shut down. Within the Oil and Gas group, each company has sold or put up for sale assets that are not core holdings. At the same time, our Oil and Gas companies have taken advantage of the excellent opportunities to purchase properties that complement their core holdings at very attractive prices.

Despite the tough times, we continue to invest in the exploration activities required to make sure that we have the top quality natural resource assets to meet our future needs in mining and oil and gas. 1992 exploration expenditure levels, however, will be scaled back from 1991 levels.

Technology Just as important as the quality of Noranda's assets is the technology we employ in turning the natural resource assets into usable products. It is critical that we be

Results of cooperation

The Noranda Aluminum smelter at New Madrid, Missouri, started 1991 producing a record 41 million pounds of aluminum for the month of January. This achievement resulted from the new union-management working relationship that followed a 94-day strike in 1989 and 20 years of an adversarial relationship.

Now management and union work on issues of common concern together. They seek to resolve differences at the lowest possible level. Maintaining open communication among all workers and management has proved to be a fundamental element in achieving their successes.

Grievances, which used to average as many as 35 a month, are today down by 70%. Production, productivity and sales are up.

After the strike

A year ago, Brunswick Mining and Smelting's huge zinc/lead mine near Bathurst, New Brunswick was crippled by a bitter 10-month strike. Management-labour relations were at an all-time low and some industry analysts had all but written off the operation. What a difference a year has made. Productivity has increased by more than 30% since the strike ended in May 1991, despite a 12% reduction in the total workforce. Employees are consistently producing more than 13 tonnes of ore per worker per shift, a major improvement over the 10 tonnes that used to be the norm. Brunswick is going through a fundamental cultural shift, emphasizing a more open and co-operative operating style. The progress made to date is encouraging many of the mine's 1,200 employees to look positively to the future.

among the leaders in process technology. Because of this, the Noranda Group is one of Canada's major investors in research and development. Noranda Inc., MacMillan Bloedel and Falconbridge each support technology centres which work together in areas of mutual interest. Noranda's Technology Centre in Pointe Claire, Quebec, completed a major physical expansion program in late 1991, and now houses seven specialized laboratories and four pilot plants under one roof.

Major technology achievements in 1991 include:

- building on our mining expertise in microseismic sensing and applying it to the monitoring of hydraulic fractures used by energy companies to enhance oil recovery, eliminating the cost of drilling additional observation wells;
- development of a concentrate injection process for putting copper concentrate directly into the converter at the Horne smelter, thereby increasing the smelter's capacity at low capital cost and better eliminating impurities;
- implementing a new lime kiln control technology at Maclaren's Thurso pulp mill. Results were:

reduced sulphur emissions, improved lime quality, reduced energy costs, and the elimination of a bottleneck;

- use of a computer-assisted engineering technique to simulate a production process. At our aluminum smelter, this technique supported the decision to increase the treatment capacity of existing furnaces, thereby avoiding a \$2.5 million capital expenditure to build a new furnace.

People The importance of having a highly skilled and motivated workforce at all levels of an organization cannot be overemphasized. The competitive environment and demands of new technology put a high premium on this dimension of our strategy. During 1991, we saw the remarkable progress that can be made in an operation when all of the stakeholders commit themselves to common goals. Two sidebar stories in this section describe turnarounds from abysmal labour relations and low productivity to a spirit of mutual respect and co-operation and production records. This kind of commitment will be required in every operation within our Group; without it, we cannot hope to achieve our vision.

The most difficult aspect of the past year has been the need to curtail production or close operations because of market conditions or the inherent lack of competitiveness of an asset. Layoffs have been experienced throughout the Group. In every case, we do our utmost to treat people fairly and with dignity. Noranda Minerals' efforts earned the company an award from the Canadian Mental Health Association for excellence in addressing the personal issues related to the closure of the Brenda Mine in British Columbia. It is our goal to "right size" each of our operations so that we can maintain steady levels of employment over time. Unfortunately, the highly cyclical nature of our businesses makes this difficult to achieve, but our commitment to do so is strong.

As we move into 1992, most of our operations are setting specific goals for improving their competitive position. Continuous improvement through strong focus on our assets, technology and people is a vital component of our corporate strategy.

Cogeneration at NCO

North Canadian Oils is one Noranda Group company that has gained a competitive edge by carving out a niche market for itself. That niche is power cogeneration.

Cogeneration is the production of two energy forms, electricity and steam, from a single fuel source. The environmental fuel of choice is natural gas, and cogeneration represents the largest single incremental market for natural gas in North America.

Conventional thermal power stations can waste up to 60% of the input energy which is emitted into the environment as heat waste. Cogeneration systems increase the overall efficiency to 60-80% of input energy, making these systems both more environmentally compatible and able to provide good economic rates of return.

North Canadian's cogeneration operations complement its exploration, production and marketing activities. Natural gas sales to cogeneration facilities are expected to provide North Canadian with a steady source of cash flow and earnings. The high load factors, attractive prices and long-term supply arrangements that are an inherent part of a cogeneration contract are particularly important during times when an excess supply of natural gas keeps prices low.

Blasting Breakthrough

Noranda scientists have made a major breakthrough in rock blasting technology. Plasma blasting, the revolutionary alternative to traditional blasting, promises a major leap in productivity and safety. Although the process of blasting rock by using electricity has been known for decades, scientists at the Noranda Technology Centre in Pointe Claire, Quebec, have made the application breakthroughs.

By linking an energy source to a specially designed blasting probe, Noranda scientists have been able to break hard rock with sudden bursts of electricity. The technology could lead to development of a continuous mining machine that would have numerous productivity and safety advantages over traditional methods.

Strategies for Success

Financ

Financial strength at Noranda means having the financial reserves to operate in both good times and bad without having to compromise our day-to-day business activities or our ability to react to unexpected opportunities.

Noranda's businesses are capital intensive. Large-scale exploration and development programs must be maintained to continually replenish our otherwise diminishing asset base.

New technologies, equipment and facilities for our Mining and Metals, Forest Products and Oil and Gas operations are expensive but necessary to maintain and build upon Noranda's production base. Virtually all new projects need long lead times to become profitable, and require years of successful operation to recover initial capital investments.

The prices of and demand for our products are cyclical, volatile and largely beyond our ability to control. In addition, because our products are priced in U.S. dollars and our operating costs are primarily in Canadian currency, even small changes in exchange rates dramatically impact

Noranda's businesses demand a strong capital structure that can support the Company's commitments in any economic environment.

al Strength

our earnings and cash flows.

All of this demands a strong capital structure that can support long-term financial commitments in any economic environment.

Our large permanent capital base and the support of a financially-strong major shareholder help to provide this financial strength. Equally important are the well-established and positive relationships Noranda has with major Canadian and international banks and underwriters.

At Noranda we measure financial strength in a number of ways. These include:

- **cash flow:** Despite the fact that we reported a loss in 1991, Noranda's total cash flow, including proceeds from the sale of assets and the issue of shares, was still substantial. It totalled \$1,154 million, down from \$1,354 million in 1990. This ability to continue generating substantial cash flow in difficult years is crucial for the maintenance of our assets. As in past years, much of the cash flow was used for capital expenditures and continuing exploration programs. While these expenditures and programs were scaled back in 1991, they still totalled \$931 million as compared with \$1,713 million in 1990.

- **consolidated debt to equity ratio:**

At year-end, Noranda's ratio of consolidated net debt to equity and minority interests stood at 0.68:1. Although this ratio is higher than our historical average, it is manageable and not unexpected. Noranda has incurred significant expenditures over the last three years and the current recession continues to make cash management difficult. Our goal is to reduce our debt to equity ratio to a lower level over the next three years so long as doing so does not compromise the future of our businesses. With 72% of our debt at floating rates we have benefited from the substantial decline in short-term interest rates in 1991.

- **corporate debt to equity ratio:**

Noranda's net debt to equity ratio was 0.32:1 at December 31, 1991 on its corporate balance sheet that includes all wholly-owned operations and subsidiaries but only guaranteed debt of partially-owned subsidiaries and joint ventures. This deliberately conservative position gives Noranda the financial capacity to pay for its share of equity issues of public subsidiaries. In 1991, Noranda subscribed for \$137 million of the \$166 million of common equity issue

Three-way win

The 1991 sale of Noranda's Canada Wire and Cable division to Alcatel Cable was a win situation for the three companies. In 1990, it was agreed that Canada Wire needed a strategic alliance with another major manufacturer to achieve the critical mass necessary to compete in a global market. Alcatel Cable of France, one of Europe's largest cable manufacturers, was looking to expand its North American operations by acquiring world-class facilities.

The result was a sale through which Noranda received more than \$400 million in cash. In this process Canada Wire has been assured of a future with a globally-competitive company. Noranda has bolstered its balance sheet and helped to preserve its financial strength despite 1991's very tough economic environment.

by Noranda Forest, who in turn subscribed for \$50 million of a \$151 million equity issue by MacMillan Bloedel.

- **reserves:** Noranda's financial strength is also measured by its immediately available financial reserves. Our policy is to maintain sufficient undrawn lines of credit and reserves of investments to fund any cash shortfall that may arise from operations or from acquisitions. At December 31, 1991, undrawn lines of credit, combined with cash and securities, was \$3 billion.

- **diversification:** Noranda's strategy of owning a diversified portfolio of natural resource assets is designed to even out earnings performance by

lessening the dependence on any one product or market. Our exposure to the various commodities is shown on the sensitivity chart included on the next page. The chart shows the impact on after-tax earnings of a 10% change in the price of each of the products listed. With virtually all commodity prices at a low level in 1991, this strategy was of limited value. Nevertheless, we still believe that our product diversification will benefit us in the future.

In 1991, the difficult economic conditions tested our financial strength. Because of Noranda's temporary declining cash flow, greater selectivity had to be exercised in

10-year Financial Leverage

Capital Sources (\$ billions)



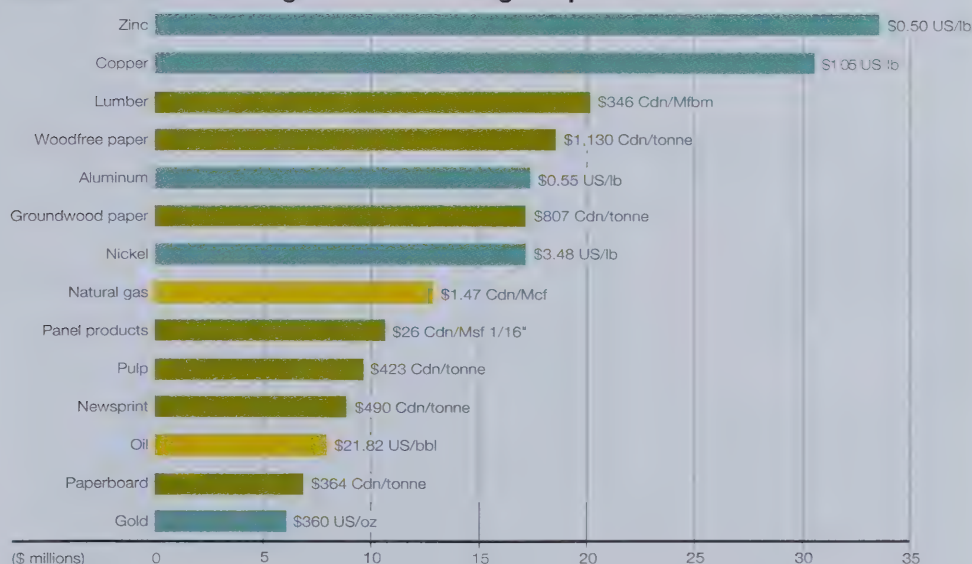
choosing capital expenditures and exploration prospects. Nevertheless, we were still able to provide financial support for projects that ensure the renewal of our asset base. Examples include the sinking of a third shaft at the Kidd Creek mine in Timmins, the purchase of undeveloped properties in the Elmworth field in Alberta, an investment to increase our ownership in Louvem and hence the Louvicourt ore body, and continued investment in reforestation.

Size and recognized expertise are two additional measures of financial strength. Noranda has both. Our size and expertise have enabled us to diversify our sources of financing. This is particularly

important in today's troubled economic climate. In 1991 almost \$800 million of new long-term financing was put in place, drawing on such diverse financing sources as Canadian, U.S. and European banks and the U.S. and Canadian public debt and equity markets. By being able to participate directly in international capital markets, Noranda has the ability to obtain the funds it needs from a variety of sources at competitive costs.

With persisting difficult economic conditions, Noranda's financial strength will be essential to make sure that we are in a position to retain our competitive assets as the building blocks for our future.

Effect on 1992 earnings of a 10% change in prices



Earnings sensitivity to changes in the Canadian dollar and interest rates

A one cent U.S. decline in the value of the Canadian dollar would increase 1992 earnings by approximately \$21 million.

Noranda's results are also sensitive to interest rate changes. A 1% decline in rates would increase annualized earnings by \$21 million.

Effect on 1992 earnings of a 10% change in prices

This chart shows the effect on Noranda's annualized earnings of a 10% price change by product. For example, a 10% rise in zinc prices would increase Noranda's annualized earnings by \$34 million. Calculations are based on fourth quarter 1991 market or realized prices as shown at the end of each bar.

Environmental

Environmental protection is a global concern. Noranda accepts its responsibilities and continues to work with other major corporations, environmental groups, international organizations and governments to find ways to implement better environmental practices.

Recent polls have indicated that the relative importance of the environment as an issue has declined for most Canadians. It remains, however, one of the Noranda Group's top priorities. As a natural resource company, our businesses, by their very nature, are intrusive on the environment. We accept the significant responsibilities this entails as a cost of doing business in the natural resource sector.

Noranda's emphasis on environmental management systems has made procedures like our environmental audits a way of life. Environmental audits cover everything from atmospheric emissions and water discharges to occupational health and industrial hygiene. The audit program is a process designed to determine compliance with government regulations, determine compliance with

Noranda's own guidelines, reduce potential risks and liabilities and make sure that we are applying the "best management practices" at our operations. Our audits have become a model for many other companies.

Noranda has maintained its commitment of time, effort and money to research and new technologies that improve our environmental performance. It is through research and development that we are making some of our most important environmental achievements. For example, the Noranda Technology Centre is developing techniques to cover mine tailings to prevent the formation of acid mine drainage which would result in water contamination.

Environmental protection is an evolving activity, and Noranda has moved into two new areas.

The first involves communication within Noranda.



Compatibility

The Company is intent on developing a culture in which all employees understand their role in helping to implement our environmental policy and coming up with ideas to do things better. In 1991 we conducted extensive employee opinion surveys to determine their views on how we are doing and the tools employees need to play a strong role. This data is being used to develop the comprehensive communication and training programs required to meet our ambitious goal.

The second initiative was the publication in 1991 of the Group's first environmental reports by Noranda Minerals and Noranda Forest. The reports were made available to shareholders and the general public. These reports provide a straightforward account of compliance records, emission levels, discharges and capital expenditures devoted to the environment. They were welcomed enthusiastically by stakeholders.

The decreased importance of environmental issues in the public's perception has not lowered Noranda's standards. As a minimum, our companies aim for consistent, systematic compliance with legal requirements. In addition, Noranda sets its own realistic targets for emissions, discharges, reduction and elimination,

which often go beyond legal compliance requirements. A case in point is the Horne smelter in Rouyn-Noranda, Quebec. We are already meeting the 1994 target of 70% reduction in SO₂ emissions. The law calls for only 50%. Our new goal is to reduce emissions by 90% by the year 2000.

Environmental protection is a global concern. It is a problem owned collectively by individuals, businesses, industry and governments. It requires global solutions involving all stakeholders. Recognizing this, Noranda continues to work with other major corporations, environmental groups, international organizations and governments to find ways to implement better environmental practices.

Finally, although Noranda's environmental policy has been a model for many, we are currently reviewing it to make sure that it adequately reflects today's standards and the demands of the future.

To provide a more detailed analysis of Noranda's environmental performance, Noranda publishes two environmental reports. If you would like copies of these reports, please complete the postal reply card enclosed at the back of this report, or contact Noranda's Corporate Communications Department in Toronto at (416) 982-7089.

Metals recycling

Metals encased in tonnes of scrap material are getting a second life at Noranda Minerals' Horne smelting facility in Rouyn-Noranda, Quebec, where recycling has become a major business.

About 120,000 tonnes of secondary material are processed at the facility each year, representing 15% of the Horne's annual material requirements. Included in the scrap material are such everyday items as telephones, wire, circuit boards and computers that would otherwise end up in landfill sites. Since recycling reduces the amount of mining and milling required, it also saves energy and lessens output to tailing ponds.

In July 1991, Noranda's employee magazine presented Chairman Alfred Powis' views on Canada's constitutional debate. His letter, reprinted on the following pages, served as a starting point for feedback from employees on the issue. A reply card was inserted with the magazine, *Panorama*, asking for employees' opinions.

Responses were received in both English and French from employees across the country. A special issue of *Panorama*, reprinting a round-up of responses, was published. While the magazine didn't offer an answer to our constitutional crisis, it did offer something just as powerful: a forum for employees to voice their opinions. A sample of the opinions of our employees is included in this report. If you would like a copy of this special issue, please complete the postal reply card enclosed at the back of this report.

Canadian

**by Alfred Powis, Chairman,
Noranda Inc.**

Canada faces a number of pressing national problems, but none is more serious than the constitutional debate that threatens to tear the country apart. The failure of the Meech Lake Accord was a national tragedy. We now face the prospect, at best, of a revision to our constitutional structure that goes far beyond Meech Lake and, at worst, a breakup of the country.

Noranda's roots in Quebec are very deep. We started there, in the city that still carries our name. Many of our employees were born and educated in Quebec. The heart of our metallurgical operations is located there, as well as important mining, forest products and manufacturing

operations. Our assets in the province are close to \$2 billion, generating some \$1.4 billion of revenues each year and about 15% of our operating earnings. We're committed to sustaining our operating base in Quebec, generating a payroll of \$350 million.

On a personal note, I grew up as part of Quebec's English-speaking minority. I had the benefit of an excellent education in my own language from kindergarten through university, as well as almost every other service I needed. In spite of such unhappy symbols as the banning of English signs, this would still be the case today. In every important respect, treatment of the anglophone minority in Quebec has always been and continues to be better than the

Everyone's Responsibility

treatment of francophone minorities in the rest of Canada.

If Quebec were to separate, Noranda would adapt to whatever changes were necessary and would remain a significant part of the industrial fabric. Whatever happens, our operations in Quebec would no doubt remain closely integrated with

Unity

those in the rest of Canada. But to say that Noranda's operations and structure would not likely be materially affected by a breakup of the country misses the point. The simple truth is that all Canadians, in Quebec and elsewhere, would be diminished in ways that are both tangible and intangible.

I've seen no credible study that quantifies the economic cost of divorce, but to believe that there would be no significant economic cost to all Canadians can most kindly be described as wishful thinking. There would be other costs as well, unquantifiable, but nevertheless very real.

Our self-inflicted wounds have given rise to a national mood that is

at the same time pessimistic, apathetic and corrosive. Yet, we're among the world's most fortunate people. We occupy a vast land mass, rich in resources, and with only 26 million people we've built the eighth largest economy in the world, with the second highest per capita income.

We've developed an enviable quality of life. We have a democratic heritage, a tradition of tolerance, a respect for the law and individual liberties, a compassionate social system, and a linguistic and cultural diversity that ought to be a source of great strength. Given the opportunity, tens of millions of people from all over the world would uproot themselves for the chance to live here.

Small wonder that people outside Canada can't believe that we'd be prepared to tear it apart. But that's exactly what we seem prepared to do. In Quebec, sovereignty seems to be achieving an aura of inevitability, while in much of the rest of Canada there seems to be an attitude of indifference — if they really want to go, let them.

We need to stand back and take a hard look at what we've achieved. After nearly 125 years, changes in our federal system are needed, but preservation of that system is the best conceivable option for all Canadians.

Laurent Lavoie *Rouyn-Noranda,* *Quebec*

For me, Canada is my country. I was born here and I hope that we, we Canadians, will be adult enough to keep this beautiful country together.

(submitted in French)

Thomas Scott *Vancouver,* *British Columbia*

There should be three distinct societies — not just one. English, French and Aboriginal. No way should the Aboriginal people be left out. After all, it was their country.

(submitted in English)

The rest of Canada must understand that Quebec is serious about wanting real change, but the sense of grievance and alienation is not confined to Quebec. The present federal structure is under attack in virtually all regions of the country. The current division and sharing of powers is a source of federal-provincial conflict and of costly and divisive competition and duplication. While past efforts to deal with this have been unsuccessful, the need for constructive action is now urgent.

Our only chance is a rebalancing of federal and provincial powers, involving a shifting of responsibilities between the various levels of government. Coupled with reform of certain federal institutions, such a rebalanced federalism could satisfy the legitimate aspirations not only of Quebec but also of other regions of the country. Moreover, it could work a great deal better than the system we now have.

If we fail to achieve this, all Canadians will be losers. Few of us claim to be constitutional experts, but we all need to throw off our attitudes of inevitability and indifference about the outcome. In spite of our problems, Canada is a fine and good country, and we owe it to our children to pass it on to them intact.

Aurèle Gauthier
Rouyn-Noranda,
Quebec

With all the refusals that Quebec has had to endure from the federal government and the rest of Canada, I hope for an independent Quebec with association with Canada, if the latter so desires.

(submitted in French)

Thomas Hobbs
Toronto, Ontario

Canada is a richer country because of its diversity. Quebec's special needs must be accommodated within confederation or else all Canadians will lose part of their identity and heritage.

(submitted in English)

Gary Beaudette
Houston, British
Columbia

Canada means a united country from sea to sea to sea, where all people are treated equally in all services and rights and respects.

(submitted in English)

Téléphone
Lacroix
Montreal North,
Quebec

I am for a united Canada: ten provinces; two territories; one country. Bilingual and free choice. Every person has the right to a mother tongue and to his or her religion. It is a sacred right. Long live Canada, the freest country in the world.

(submitted in French)

Frank Grebenc
Manitowadge,
Ontario

My Canada stretches from sea to sea. It is a country where we are not just tolerant of one another, but we listen to understand each other. My Canada needs Quebec and Quebec needs the rest of Canada.

(submitted in English)

Daniel Saulnier
Bathurst, New
Brunswick

I think it is high time to modernize the Constitution. It may be a laborious procedure, but it is an opportunity to finally solve the question of Canadian unity.

(submitted in English)

Guy Parent

Pointe-Verte, New Brunswick

As a Canadian, I think that nobody should remain indifferent in the face of the very real possibility of seeing one's country break into pieces; and we should be absolutely convinced that no one will come out the winner in such a tragedy. I hope that the voice of understanding, moderation and common sense will guide those who by their functions have a very special responsibility for the future of our country.

(submitted in French)

Tony Cirino

New York, New York

As a native Canadian (Montrealer) living in New York, the Canadian constitutional problem hits me very hard. I truly believe there is too much apathy throughout the country on the subject. I want to believe that the majority of Canadians want unity — they just aren't moved enough to be heard on the subject. Come on! Let's get off our backsides and let's be counted!

(submitted in English)

Jean-Paul Falstra

Montreal, Quebec

I am for Canadian unity. Having always lived in Quebec, I don't think that Quebecers think otherwise.

(submitted in French)

Bryan R. Bennett

Toronto, Ontario

I hope we build on the cultural diversity that makes out country unique. Tearing it apart will make losers of us all. I am proud to be a Canadian, and feel very fortunate to call Canada my home.

(submitted in English)

Normand Labbé

LaSarre, Quebec

I feel a bit torn by the possibility of no longer being Canadian. On the other hand, I completely support the demands made by Quebec during the Belanger, Campeau and Allaire Commissions. That is, to possess all our economic and cultural levers for the particular needs and development of Quebec.

(submitted in French)

Bruce Fenwick

Calgary, Alberta

Putting together a workable constitution requires acceptance of the views of others. Views, which may be different from our own, must be treated with the same respect as we wish for our own views.

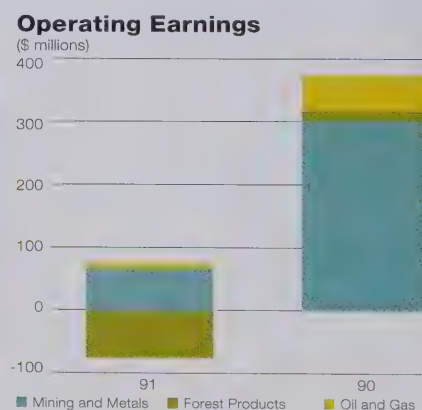
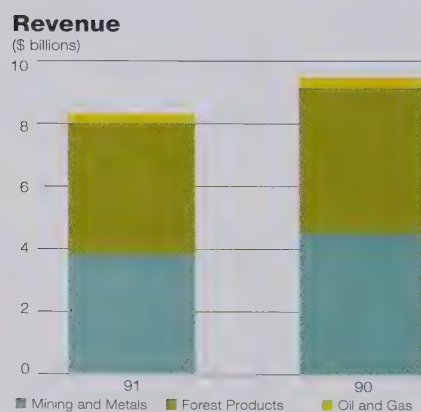
(submitted in English)

Consolidated Operating Results

Excess worldwide production capacity in most of Noranda's products, a result of the continuing North American recession, was the reason for 1991 sales being 13% or \$1.2 billion lower than 1990. 1991 saw lower product prices in all business segments and reduced volumes across most product lines. The mid-year sale of Canada Wire and Cable to Alcatel Cable S.A. also contributed to the reduction in 1991 sales.

Investment income was \$14 million higher in 1991 due to gains on investment dispositions, including the sale of a portion of Noranda's investment in Cognos, reducing our interest to 12%. Consistent with Noranda's other operating results and for the same reasons, earnings of associates, primarily Norcen and KNP, decreased 35% from 1990 levels.

Operating earnings in 1991 were basically break-even, with losses in the Forest Products group offsetting modest earnings in the Mining and Metals and Oil and Gas groups. Earnings continue to be adversely impacted by high depreciation and depletion charges, a result of capital spending over the past few years which has not yet realized full earnings potential. Tight cost controls, including employment reduction and plant shut-down programs, helped to maintain operating costs at 95% of 1990 levels. Because many of Noranda's costs are fixed in the short term, they do not decrease proportionately with revenues. 1991 results were adversely affected by \$108 million of charges including restructuring provisions, writedowns, closure costs and the cost of the long strike at Brunswick Mining and Smelting.



Interest rates declined significantly in 1991 as compared with 1990. Noranda's practice is to maintain floating rates of interest on a significant portion of its long-term debt. This resulted in a \$43 million reduction in interest charges in 1991 versus 1990 despite modestly higher debt levels.

The net result for the year was a loss of \$133 million including an after-tax gain of \$78 million on the sale of assets, principally Canada Wire and Cable.

The fragile world economy is expected to show some improvement starting in the second half of 1992. Noranda will benefit from this and from the continuation of the weakening trends in the Canadian dollar and lower interest rates. As a result, earnings in 1992 should be better than 1991.

As a large diversified natural

resource company, Noranda earns revenue from many different products in many different markets. These markets react differently to outside influences. This diversity, one of Noranda's strengths, is demonstrated by the sensitivity chart on page 15 of this report, which shows the impact on Noranda's after-tax earnings of a 10% change in the prices of our major products. With prices of most products being depressed in 1991, however, this diversity offered little support.

The side bar note on page 15 references the sensitivity of Noranda's earnings to changes in interest rates as well as to the Canadian dollar.

The one-and-a-half cent rise in the average value of the Canadian dollar versus the U.S. dollar in 1991 compared to 1990 increased

Noranda's 1991 net loss by approximately \$32 million.

The graphs on the opposite page reflect the comparative revenue and operating earnings by group, before the cost of borrowing and corporate expense, net of investment income and the gain on the sale of assets.

In an effort to provide a clearer perspective on Noranda's operations, information relating to operations has been consolidated into three groups: Mining and Metals including Noranda Aluminum and Wire Rope Industries, Forest Products and Oil and Gas.

Quarterly Earnings (Loss) by Group

(\$ millions)	1st	2nd	1991 3rd	4th	Year	1st	2nd	1990 3rd	4th	Year
Mining and Metals	58	16	7	(15)	66	76	106	74	45	301
Forest Products	(5)	(12)	(20)	(38)	(75)	23	17	(5)	(19)	16
Oil and Gas	18	2	1	(10)	11	22	(4)	16	25	59
Earnings (loss) before the following	71	6	(12)	(63)	2	121	119	85	51	376
Cost of borrowing and corporate expense, net of investment income and gain on the sale of assets	(56)	12	(45)	(46)	(135)	(62)	(63)	(67)	(64)	(256)
Earnings (loss)	15	18	(57)	(109)	(133)	59	56	18	(13)	120
Earnings (loss) per common share	\$ 0.00	0.02	(0.39)	(0.67)	\$(1.04)	\$0.26	0.24	0.01	(0.15)	\$0.36

Mining and Metals



Mining and Metals Financial Summary

(\$ millions)	1991	1990
Sales	3,810	4,567
Operating earnings	66	301
Average net assets employed	3,570	3,762
Cash from operations	268	649
Capital expenditures	303	498
Employees	23,335	27,393

Noranda's Mining and Metals group consists of Noranda Minerals, a major mining and metallurgical company, Noranda Aluminum, an integrated producer of primary and fabricated aluminum products, and Wire Rope Industries, Canada's largest fabricator of steel wire rope. Noranda's Mining and Metals group sells the majority of

its products in global markets, subject to the cyclical and currency risks associated with internationally traded commodities. Competition within the mining and metals industry includes not only producers in OECD countries, but developing nations with low wage structures. The quality and scale of Noranda's operations make it one of the world's lowest cost miners of zinc, nickel and gold, while excellent metallurgical and fabricating assets provide a competitive edge for Noranda's aluminum, copper, nickel and zinc businesses.

Noranda Minerals

Noranda Minerals, through its direct and indirect ownership in 28 mines and 10 metallurgical plants, is a major producer of zinc, copper, nickel, gold, silver, lead, potash, cobalt and sulphuric acid. It is also a major recycler of secondary copper, nickel and precious metals.

Sales for 1991 of \$2.2 billion were substantially below the 1990 level of \$2.7 billion. As a result, net operating earnings fell to \$14 million from \$217 million in 1990. Lower prices for most products, including zinc, nickel, copper and precious metals, were

Production Volumes

Mine production	1991	1990
(000 tonnes)		
Ore treated	21,485	26,475
Copper	196	203
Zinc	450	476
Lead	58	61
Potash	1,055	1,087
Nickel	32	31
(000 oz)		
Silver	14,611	17,891
Gold	650	656

Refined metal production

(000 tonnes)		
Copper	404	364
Zinc	268	267
Lead	43	46
Nickel	44	43
(000 oz)		
Silver	25,378	24,210
Gold	1,227	1,055

Primary aluminum

(000 tonnes)		
Metal production	216	215

Fabricating

(000 tonnes)		
Aluminum sheet	112	116
Aluminum foil	90	98
Other aluminum	14	12
Steel wire rope	27	22
(000 units)		
Aluminum wheels	1,889	1,784
Steel wheels	869	1,064

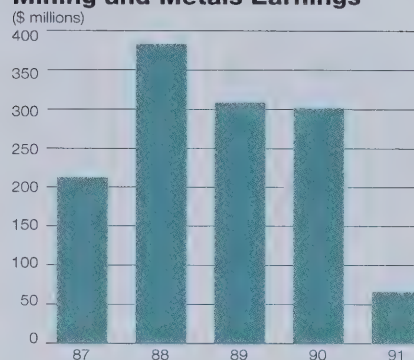
major causes of the lower sales and earnings. On the positive side, significant productivity improvements were realized at most operations, notably the metallurgical plants in Quebec, and at the Brunswick mine following settlement in May of a 10-month strike. Geological reserves were further expanded in 1991 at the New World gold/copper property in Montana, the Brewery Creek gold deposit in the Yukon and at Matagami, Quebec, where a new zinc/copper deposit was discovered on the Orchan property. The year was also one of consolidation of Noranda's gold assets with the sale to Hemlo of approximately 290 exploration properties, four development projects and the 55% interest in the Silidor operation in Quebec.

In the metal markets, consumption levels were only slightly lower than in 1990, but North American production increased and was supplemented by sharply higher exports from Eastern Europe. The resulting increase in stocks was modest compared to previous recessions but still caused prices to fall. On average, zinc declined by 26%, copper by 12%, nickel

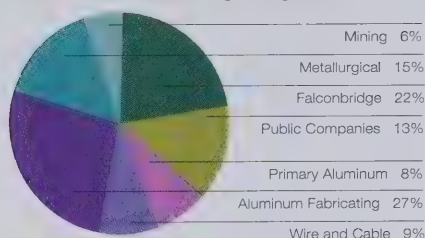
by 8% and gold by 6% from 1990 levels.

Great strides were made during 1991 in reducing operating costs and improving productivity. At the Brunswick mine, cost per tonne milled was reduced to 80% of pre-strike levels, notwithstanding the cost of the new labour contract. At Heath Steele, metallurgical results and costs continue to show improvement despite the relatively low ore grades. Hemlo's Golden Giant mine established a production record of 443,400 ounces of gold. Overall gold volumes were further increased with additional production from Silidor and Lac Shortt. Higher ore grades increased output from the Gaspé and Bell copper mines while development ore from the Norita East Project augmented production of zinc and copper at Matagami. At Central Canada Potash, production, shipments and prices were all lower than in 1990 as a result of generally weak agricultural markets. Increased copper anode production from the Horne smelter contributed to higher refined copper volumes at CCR, the latter reaching 110% of 1990 volumes. At CEZ, problems encountered early in the year with the start up of the new cellhouse

Mining and Metals Earnings



1991 Net Sales by Segment



Earnings (Loss) by Segment

(\$ millions)	1991	1990
Mining	(2)	45
Metallurgical	8	36
Falconbridge	63	140
Public companies	(30)	23
Exploration, Sales and other	(25)	(27)
	14	217
Primary aluminum	26	35
Aluminum fabricating	29	40
Wire and cable and other	(3)	9
	52	84
	66	301

were resolved in the second half, with refined zinc production at capacity levels for the last four months of 1991.

Earnings from the Falconbridge operations were lower than in 1990, reflecting lower prices for all metals except cobalt. However, lower unit operating costs at all operations, record production levels at the Nikkelverk refinery in Norway, higher-margin custom materials in the integrated nickel operations and reduced exploration expenditures contributed positively to 1991 results.

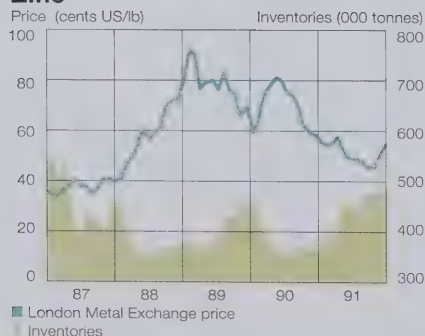
Noranda Minerals maintains one of the industry's largest exploration programs for base and precious metals. In 1991 expenditures totalled \$124 million, including \$30 million from joint venture partners on 550 grassroots properties. Project-related expenditures totalled \$74 million of which \$21 million was provided by joint venture

partners. During 1992 Noranda's grassroots expenditures will be approximately \$85 million at 360 properties.

During the year, Noranda Minerals continued to restructure along functional lines, resulting in a flatter organization, 1,300 fewer employees and 24 changes at the senior management level.

Noranda Minerals' capital expenditures totalled \$246 million in 1991, including Noranda's share of the development of the Kidd Creek mine in Timmins for \$19 million, the Craig mine at Sudbury for \$32 million, the Raglan, Quebec, project for \$14 million and the New World project for \$22 million. An investment of \$35 million to increase Noranda's ownership to 53% in Louvem, owner of a 45% stake in the major Louvicourt copper/zinc deposit, was also made during the year. Overall, capital expenditures in 1992 are expected to be about the same as in 1991.

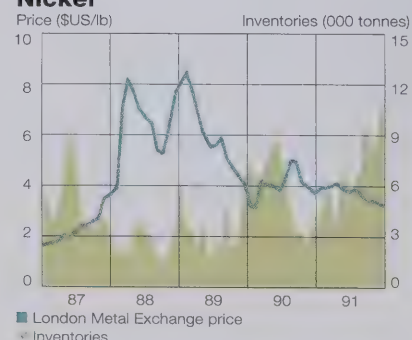
Zinc



Copper



Nickel



Exploration Projects

Name	Location	Company's % Interest	Tonnes (millions)	Grades
Collahuasi	Chile	17	1,000	0.92% copper
Holloway	Ontario	25	5.0	0.28 oz/mt gold
Izok lake	Northwest Territories	26	13.4	3.2% copper 14.4% zinc 2.4 oz/mt silver
Lindsley	Ontario	50	7.0	1.5% copper 1.6% nickel
Louvicourt	Quebec	24	22.9	4.0% copper 2.0% zinc 0.04 oz/mt gold 1.0 oz/mt silver
Lynne	Wisconsin	100	6.6	0.4% copper 8.3% zinc 0.02 oz/mt gold 2.3 oz/mt silver
Mobrun 1100 Lens	Quebec	13	8.1	5.6% zinc 1.3 oz/mt silver
Montanore	Montana	55	129	0.8% copper 2.3 oz/mt silver
New World	Montana	27	9.8	0.75% copper 0.19 oz/mt gold 0.91 oz/mt silver
Raglan	Quebec	50	17.7	0.8% copper 3.1% nickel

During 1991, Noranda Minerals provided an additional \$51 million against earnings to cover reclamation and mine closure costs. As at December 31, 1991, a total of \$131 million had been set aside to cover such liabilities.

A detailed analysis of Noranda Minerals' environmental performance is available in the 1991 Noranda Minerals Environmental

Report – a postal reply card is enclosed at the back of this report.

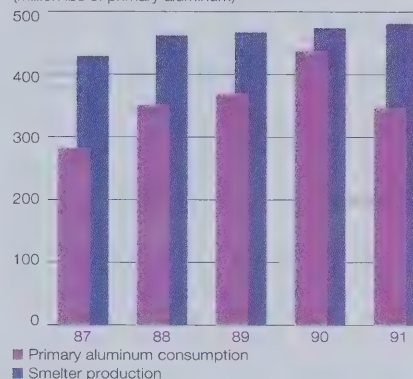
Noranda Aluminum

Noranda Aluminum comprises 12 operations in the United States that produce primary aluminum metal, aluminum sheet and foil, aluminum and steel automotive wheels and vinyl building products.

Near-capacity production worldwide for most of the year, a surge in exports of East European

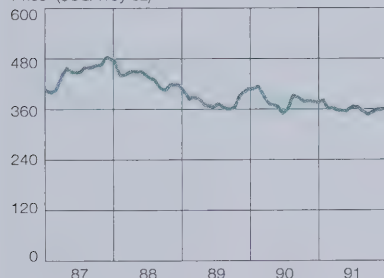
Aluminum Group Integration

(million lbs of primary aluminum)



Gold

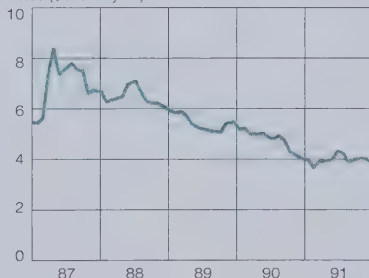
Price (\$US/Troy oz)



■ London Market price

Silver

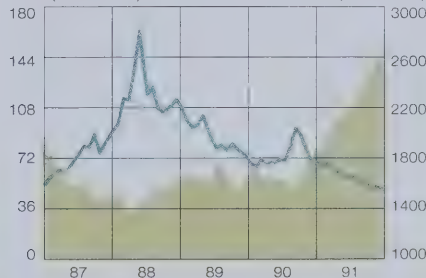
Price (\$US/Troy oz)



■ New York Market price

Aluminum

Price (cents US/lb)



■ London Metal Exchange price
■ LME and producer inventories

metal and lower demand in North America caused primary aluminum prices to fall by more than 19%, with year-end quotations, in real terms, at an all-time low.

Operating earnings for the Noranda Aluminum group were \$55 million in 1991, \$20 million lower than 1990 results. The earnings decline was caused by lower aluminum prices and weak economic conditions, cushioned partially by a forward sale of 20% of 1991 production at favourable prices.

The New Madrid Missouri smelter operated at capacity with reduced costs due to improved productivity and alumina, power and labour contracts tied to aluminum prices.

Noranda's operating earnings were \$20 million, \$23 million lower than 1990 due to very poor markets for building products and commodity sheet. Foil operations continued to perform well.

Norandex improved its operating earnings by \$8 million over 1990 despite continued weakness in the housing industry. Vinyl siding operations showed improvement due to lower raw material costs.

American Racing Equipment, which manufactures and distributes custom aluminum and steel automotive wheels, improved earnings as a result of production

cost reductions, despite lower automotive demand.

Wire Rope Industries

Wire Rope Industries is Canada's largest fabricator of steel wire rope, with two manufacturing plants and 18 industrial supply distribution centres in Canada.

Total sales for Wire Rope Industries were \$130 million in 1991, a decline of \$10 million from 1990 sales of \$140 million. The 1991 operating loss of \$4 million, including special restructuring provisions totalling \$2 million, compared unfavourably

with break-even results in 1990.

Outlook

Metal markets are likely to remain oversupplied early in 1992.

Additional production capacity, however, is limited, so that even modest improvements in demand should cause stocks to fall and prices to recover from their currently depressed levels.

Noranda's production of zinc, lead and silver should be higher in 1992 due to increased output from Brunswick, which will more than offset the decline with the closure of the Samatosum mine

1991 Mineral Inventories

	000 tonnes	Copper %	Zinc %	Lead %	Silver oz/mt	Gold oz/mt	Nickel %	Potash %
Mining Operations								
Bell	1,275	0.70			0.03	0.01		
Central Canada								
Potash	414,696							28.7
Gaspé								
Needle Mtn.	35	1.40						
Copper Mtn. Oxide	20,178	0.44						
"E" Zone	5,608	2.64			0.41			
Geco	6,119	1.60	2.80		1.20			
Matagami Division	2,259	0.99	15.75		2.05	0.02		
Brunswick Mining and Smelting								
Brunswick	84,704	0.31	8.86	3.57	3.21			
Heath Steele	20,943	0.61	6.96	2.31	1.58			
Falconbridge*								
Kidd Creek	37,169	3.20	5.06		1.96			
Sudbury mines	43,119	1.46					1.68	
Dominicana	35,318						1.74	
Falconbridge Gold	321					0.41		
Zimbabwe	980					0.15		
Hemlo Gold Mines								
Golden Giant	15,072					0.35		
Silidor	3,718					0.17		
Kerr Addison/Minnova								
Ansil	546	5.60	1.40		0.65	0.03		
Lac Shortt	73					0.13		
Samatosum	108	0.80	1.80	1.10	22.60	0.04		
Winston Lake	1,826	1.00	13.80		0.92	0.04		

*Falconbridge inventory is shown on a 100% basis.

planned for September 1992.

Mine production of copper, gold and nickel is expected to be near 1991 levels, but ferronickel production will be lower in 1992 because of market related cut-backs. Volumes from Noranda Aluminum are expected to

approximate those in 1991.

New collective agreements to be negotiated in 1992 include those at CCR, the CEZ zinc reduction plant, the Geco and Matagami base metal mines and the Falconbridge Sudbury office, clerical and technical workers.

Efforts over the coming year will continue to be directed at reducing unit costs and improving Noranda's competitive position in all areas. Operations and product lines which do not fit Noranda's long-term core activities will be re-structured, shut down or sold.

1991 Mine Production

	Company's % Interest	Copper mt	Zinc mt	Lead mt	Silver 000 oz	Gold 000 oz	Nickel mt	Potash 000 mt
Mining Operations								
Bell	100	25,557			116	31.0		
Central Canada Potash	100							1,055
Gaspé	100	25,088			455			
Geco	100	15,282	45,125		1,172	2.0		
Lyon Lake (1)	100	240	4,182	437	249	0.5		
Matagami Division	100	2,681	56,616		464	3.3		
Brunswick Mining and Smelting								
Brunswick (2)	64	6,007	172,401	42,740	4,084			
Heath Steele	91	3,128	55,649	13,796	797			
Falconbridge (3)								
Kidd Creek	50	58,192	59,807		2,969			
Sudbury mines	50	17,111					17,087	
Dominicana	43						14,532	
Falconbridge Gold	28					27.1		
Hemlo Gold Mines (4)								
Golden Giant	46				24	443.4		
Silidor	25					38.7		
Kerr Addison/Minnova								
Ansil	26	32,071			299	34.5		
Lac Shortt	25					45.4		
Opemiska (5)	26	5,710			117	10.9		
Samatosum	18	1,159	2,520	1,280	3,673	5.3		
Winston Lake	26	3,439	54,051		192	7.8		
Total production		195,665	450,351	58,253	14,611	649.9	31,619	1,055
Company's interest		161,712	341,851	40,760	9,610	290.2	29,468	1,055

Notes:

(1) The Lyon Lake operation was shut down in May 1991.
(2) Brunswick production was reduced in 1990 and 1991 due to a strike.

(3) On a basis consistent with the way the Company records revenues, production is shown on a 100% basis for all operations except Falconbridge, where 50% of production is shown.

(4) In February 1992, Noranda reduced its ownership of Hemlo from 55% to 46%.

(5) Opemiska Division ceased production in June 1991.

1991 Refined Metal Production

	Company's % interest	Copper 000 mt	Zinc 000 mt	Lead 000 mt	Silver* 000 oz	Gold 000 oz	Nickel 000 mt
Brunswick	64			43	1,648		
CCR	100	327			22,588	1,227	
CEZ	95		199				
Kidd Creek	50	58	69		2,790		
Nikkelverk	50	19					29
Dominicana	43						15
Total production		404	268	43	25,378	1,227	44

*Not additive because Brunswick's silver production is further refined by CCR.

Forest Products



Forest Products Financial Summary

(\$ millions)	1991	1990
Sales	4,118	4,555
Operating earnings (loss)	(75)	16
Average net assets employed	2,671	2,509
Cash from (used for) operations	(50)	134
Capital expenditures	284	569
Employees	22,358	23,909

Noranda Forest operates directly, and through its 49% ownership of MacMillan Bloedel Limited and 50% ownership of Northwood Pulp and Timber Limited, 10 pulp and paper mills, 18 sawmills, 14 panelboard mills, three paperboard mills and 10 corrugated container plants in Canada and the United States. Noranda Forest and its subsidiaries own or have cutting rights in extensive timberland areas across North America which provide much of the raw material for the manufacture of its products.

Noranda Forest's sales were \$4.1 billion in 1991, a decline of 10% from 1990. The decline in sales was a result of generally lower forest products prices and lower operating rates at most of the company's mills. As a percentage of sales, operating margins declined from 2% to a negative 5% and operating earnings fell from \$16 million in 1990 to a loss of \$75 million in 1991.

Production Volumes

Building Materials	1991	1990
(MMbfm)		
Lumber	1,953	1,763

(MMsf 1/16")		
Plywood	2,142	2,651
OSB/waferboard	5,181	6,681
Particleboard	1,057	1,253
Medium density fibreboard	597	404

Communication Papers

(000 tonnes)		
Newsprint	509	615
Groundwood paper	595	708
Woodfree paper	296	326

Pulp

(000 tonnes)		
Market pulp	1,071	988

Paperboard Packaging

(000 tonnes)		
Paperboard	637	676
Corrugated containers	252	259

During 1991, Noranda Forest closed a number of facilities either permanently or indefinitely. These include: Fraser's Atholville pulp mill, temporarily closed as a result of weak pulp markets; MacMillan Bloedel's Alberni plywood mill; and Norbord's Chatham OSB mill.

Markets

Markets for Noranda Forest's principal products were weak throughout 1991. For the building materials sector this was the third year of generally soft markets as housing construction in North America remained at historically low levels. There were increases in lumber and panel products prices in the late spring due to distributors rebuilding their inventory, but the prices fell back over the summer.

Newsprint was one of the weakest segments of the forest products industry. Oversupply, which had caused lower prices throughout 1990, became worse in 1991 as U.S. newsprint consumption declined by 6% along with a considerable increase in capacity in the U.S. The demand slump was related to serious cutbacks in advertising spending in North America.

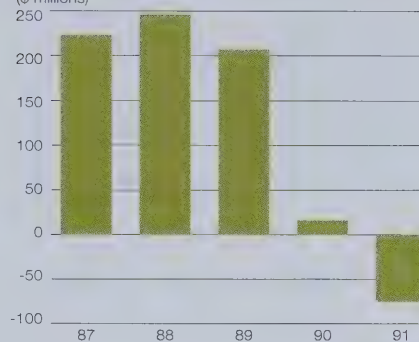
Weak advertising spending also affected coated and uncoated groundwood papers although the directory paper sector held up better than most other grades.

Fine papers experienced a sharp decline in pricing during the early months of 1991. The start up of new capacity and inventory reductions by merchants and consumers were the primary causes. Consumption of these grades grew over the year and during the second half prices recovered some of the lost ground.

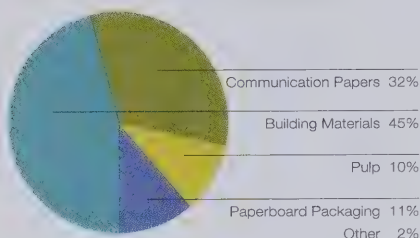
Pulp prices also declined through much of 1991. Canadian mills operated at low rates in order to contain the growth in inventories. By year end there were signs that the market had bottomed and prices for some pulp grades began to improve.

Paperboard packaging was hard hit by the slowdown in North American industrial production over the first half of 1991. Unlike many other forest products, however, little new capacity came on-stream and thus when activity picked up in the second half, packaging prices improved.

Forest Products Earnings (Loss)
(\$ millions)



1991 Net Sales by Segment



Earnings (Loss) by Segment

(\$ millions)	1991	1990
Communication papers	2	15
Building materials	(46)	(30)
Pulp	(20)	14
Paperboard packaging	(6)	14
Other	(5)	3
	(75)	16

Capital Expenditure

Capital spending in 1991 totalled \$284 million, a 50% decrease from the 1990 level. Major projects completed in 1991 were MacMillan Bloedel's linerboard expansion at Pine Hill, Alabama, and projects at Powell River and Harmac, British Columbia, to virtually eliminate dioxins from mill effluent.

For 1992, capital spending is forecast to reach \$350 million. MacMillan Bloedel will spend approximately \$300 million of this total including \$160 million on secondary effluent treatment at its three British Columbia pulp and paper mills.

Additional capital of approximately \$74 million will be required over the next several years at other Noranda Forest operations to meet new regulations and standards for air and water emissions.

MacMillan Bloedel has announced that it is investigating the building of a newsprint

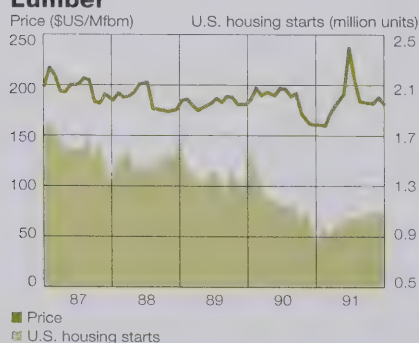
recycling mill in California in a joint venture with Haindl Papier GmbH of Germany. MacLaren has entered into a joint venture with Cascades Inc. and Donohue Inc. to construct and operate a deinking plant at Cap-de-la-Madeleine, Quebec, which is expected to be in operation in mid 1992.

Environment and Recycling

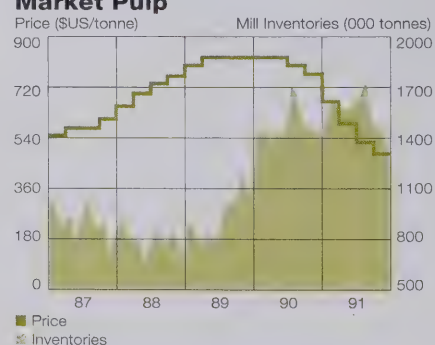
The forest industry has become a focus of public concern over the environment. Noranda Forest has again published a report on its environmental performance which accompanied its annual report, and is available by responding to the postal reply card enclosed at the back of this report. Air and water emissions, withdrawal of the working forest for purposes of conservation, recycling and solid waste disposal and controversy regarding certain harvesting practices are all issues which affect Noranda Forest operations.

Noranda Forest recognizes the

Lumber



Market Pulp



need for sound environmental performance. Capital will be required over the next two to three years to retrofit some facilities in order to meet new standards for air and water quality. Steps have been taken at all Noranda Forest operations to introduce or expand recycled fibre content in products to meet market demands. Much of the production at Noranda Forest Recycled Papers now qualifies for the Environmental Choice "EcoLogo". Recycled content in directory and in groundwood coated papers at Fraser, and in newsprint at Masson and at MacMillan Bloedel, will help to differentiate Noranda Forest's products in the marketplace.

MacMillan Bloedel currently has capital projects under way at each of its three pulp and newsprint operations in B.C. (Alberni, Nanaimo and Powell River) to construct facilities for the treatment of mill effluent. The total

cost of these projects when completed is estimated to be \$274 million. Similar projects are planned at Edmunston, Thurso and Masson to ensure that all group operations are in compliance with environmental regulations. The cost of modifications at wholly-owned mills is estimated to be \$74 million with expenditures spread over a period of several years. Northwood will be in a position to meet current and proposed standards without major modifications, except for the recently proposed B.C. regulations to be chlorine free by the year 2002. There is no technology currently available to meet such a standard. Substantial progress in chlorine dioxide substitution at Northwood has been important in responding to changing European market needs as well as in meeting environmental regulations.

Outlook

Markets for forest products are not expected to recover rapidly during 1992. However, supply-demand imbalances will ease for most grades and higher prices are anticipated for wood products,

market pulp and paperboard packaging. Little price recovery is expected for other grades, but operating rates should increase.

During 1991, labour contracts for most pulp and paper employees in British Columbia were extended to March 1992 and contracts covering most woods and sawmill employees, which expired in 1991, had not been renegotiated by year-end. Contracts covering most of the companies' employees in Eastern Canada do not expire until 1993. The agreement covering employees at Fraser's Madawaska, Maine, mill is due for renewal in late 1992.

Noranda Forest has completed a strategic analysis of all its operations to determine which assets and businesses have the potential to respond to changing circumstances and contribute to future earnings. This process could result in disposition or reduced operation of certain businesses and related assets. Proceeds from the disposal of assets will be used to reduce debt and allow growth in those businesses better situated to enhance earnings and cash flow.

Newsprint



Oil and Gas



Oil and Gas Financial Summary

(\$ millions)	1991	1990
Sales	311	317
Operating earnings	11	59
Average net assets employed	1,851	1,658
Cash from operations	386	243
Capital expenditures	250	325
Employees	4,259	4,509

Noranda's Oil and Gas group includes Canadian Hunter Exploration (100%), North Canadian Oils (51%) and Norcen Energy Resources (33%).

Noranda holds \$370 million convertible subordinated debentures of Norcen Energy which, when added to its 33% direct interest, gives Noranda an effective equity interest of 43% and voting interest of 48% on a fully-diluted basis.

Noranda's share of earnings

Production Volumes

(before royalties)	1991	1990
Natural gas (MMcft/day)		
Canadian Hunter	205	202
North Canadian	234	202
Norcen Energy	251	248
	690	652

Oil and natural gas liquids

(bbls/day)		
Canadian Hunter	9,555	8,944
North Canadian	6,549	5,001
Norcen Energy	54,533	56,800
	70,637	70,745

Established Reserves

(before royalties)	1991	1990
Natural gas (billion cubic feet)		
Canadian Hunter	1,377	1,307
North Canadian	1,023	1,258
Norcen Energy	1,791	1,701
	4,191	4,266

Oil and natural gas liquids

(million bbls)		
Canadian Hunter	86	62
North Canadian	15	17
Norcen Energy	194	172
	295	251

from the companies in the Oil and Gas group for 1991 was \$11 million, a decrease from \$59 million in 1990.

Natural gas prices were subjected to downward pressure in 1991, abetted by warm winter weather, the economic recession, and continued excess supply available in Western Canada. Oil prices were also lower on average in 1991 than in 1990, due to a significant short-term rise in oil prices in 1990 as a result of the Iraqi invasion of Kuwait.

Canadian Hunter Exploration

Canadian Hunter's sales decreased to \$157 million in 1991. The decrease reflects a lower average price for natural gas in 1991; \$1.43/Mcf compared to \$1.63/Mcf in 1990. Operating earnings fell from \$3 million in 1990 to a loss of \$19 million in 1991 mainly due to lower energy prices, increased depletion, reorganization costs related to a 20% reduction in the staff complement and the discontinuance of the U.S. exploration operations. Cash from operations was \$194 million in 1991, versus \$132 million recorded in 1990. Capital expenditures decreased to \$166 million from \$246 million in 1990.

Canadian Hunter natural gas production increased 1% in 1991 to 205 MMcf/day. Production of oil and natural gas liquids increased significantly as a result of increased production at the Brassey field in British Columbia.

The company continues to increase holdings in core asset areas. In 1991 producing and undeveloped properties at Elmworth in Alberta were acquired from Amoco for \$32 million. In January 1992, Canadian Hunter agreed to purchase BP America's 50% interest in Brassey and Noel. These acquisitions provide Hunter with significant proven reserves and exploration potential at very economic prices.

In 1992 Hunter plans to limit capital spending to forecast cash flow from operations of \$85 million. An exploration joint venture was successfully negotiated whereby Petrofina S.A. will fund \$91 million of joint-venture exploration expenditures over three years. Hunter will contribute existing expertise, land and seismic data, for a 50% interest. The discontinuance of the U.S. exploration program will reduce 1992 capital spending and depletion charges by \$38 million compared to 1991.

In April 1991, Canadian Hunter and North Canadian Oils jointly signed a natural gas pre-sale agreement with a cogeneration facility in Syracuse, New York. A \$102 million prepayment was received in exchange for a commitment to supply 120 Bcf of natural gas over 16 years.

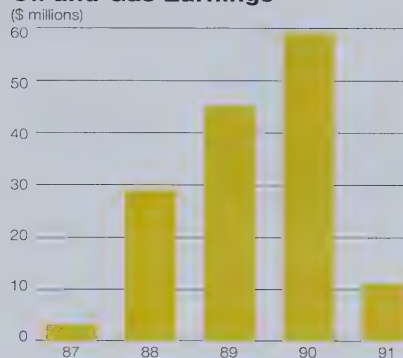
North Canadian Oils

North Canadian's total sales increased 15% from \$128 million in 1990 to \$147 million in 1991 as a result of higher production volumes. Noranda's share of earnings declined from \$6 million in 1990 to \$5 million in 1991 due mainly to lower crude oil prices and higher operating expenses.

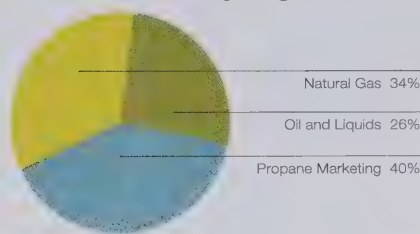
Natural gas production rose 16% and oil and natural gas liquids production by 31% in 1991, mainly due to the acquisition of Coseka at the end of 1990. A downward revision of approximately 189 Bcf resulted in a net reduction of 18% in proven natural gas reserves in 1991. The write-down reflects declining deliverability from some of the company's older fields and current economics associated with proven but non-producing reserves.

Capital expenditures for 1991 were \$84 million compared to

Oil and Gas Earnings



1991 Net Sales by Segment



Earnings by Segment

(\$ millions)	1991	1990
Natural gas	106	88
Oil and liquids	86	83
Propane marketing	7	6
Depletion and other	(188)	(118)
	11	59

\$76 million in 1990, an increase of 11%. Capital expenditures are forecast to be \$82 million in 1992. Land acquisitions and seismic activity reached new highs and will allow the company to maintain a diversified exploration program. Finding and onstream costs increased from \$0.65/Mcf in 1990 to \$1.25/Mcf in 1991 due to higher expenditures associated with deeper exploration plays in western Alberta and northeast British Columbia which yielded disappointing results. Exploration efforts in 1992 will be refocused in areas where North Canadian has developed considerable expertise and a proven track record.

Power cogeneration was a prime area of growth for North Canadian in 1991. North Canadian's 50%-owned cogeneration facility in Ada, Michigan, commenced commercial operations and the company assumed an equity interest in the Syracuse, New York, cogeneration project where North

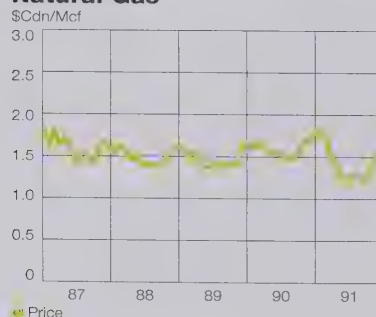
Canadian and Canadian Hunter are jointly supplying the gas. Two other cogeneration projects in Florida are in the final negotiation stage. The intention is that all such projects will be fully financed with non-recourse project financing. North Canadian has also become the major gas supplier to three cogeneration projects in upstate New York.

Despite declining gas prices and fierce competition, North Canadian maintained an average gas price of \$1.41/Mcf in 1991 against \$1.44/Mcf in 1990 due to a significant portion of sales being subject to pre-priced medium- and long-term contracts. The company has secured 59 MMcf/day of firm transportation space on the Pacific Gas transmission pipeline expansion to California.

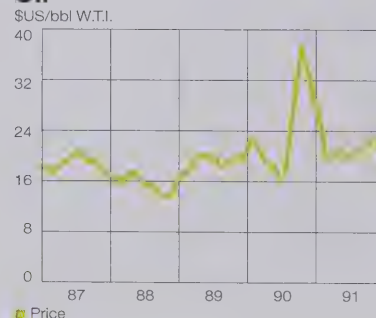
Norcen Energy Resources

Norcen's sales in 1991 were \$1 billion compared to a record \$1.1 billion achieved in 1990 when oil prices soared subsequent

Natural Gas



Oil



to Iraq's invasion of Kuwait. Gas prices declined in 1991 and propane sales volumes increased, reflecting a full year's effect of Superior Propane's acquisition of Skelgas. Noranda's share of earnings in 1991 was \$24 million down from \$48 million in 1990.

Crude oil and natural gas liquids production in 1991 was 54,533 barrels per day, down 4% from 1990. This was due primarily to a passing cyclone prompting the disconnection of the Jabiru (Australia) floating production facility. Norcen's average liquids price was \$18.85 per barrel in 1991 compared to \$23.65 per barrel in 1990.

Natural gas production reached record levels in 1991, increasing 1% to 251 MMcf/day with the commencement of production from Eugene Island Block 142 in the Gulf of Mexico in July. Natural gas prices were \$1.57/Mcf compared to \$1.74/Mcf in 1990.

Oil and gas liquids production

is expected to rise to 60,500 barrels per day in 1992 while gas production is expected to increase to 272 MMcf/day.

Capital expenditures were \$283 million in 1991 versus \$254 million in 1990 but less than planned due to reduced available cash flow and deteriorating gas markets. Exploration spending was down 1% to \$133 million, including \$32 million for international exploration in the Timor Sea northwest of Australia, drilling in Malaysia and Argentina, and the acquisition of new exploratory lands in Algeria, Chile, Indonesia and Egypt. Development spending of \$103 million was up 6% from 1990.

Capital expenditures in 1992 are presently forecast to be \$208 million including \$103 million in Canada (\$73 million development and \$30 million exploration), \$50 million of U.S. expenditures, \$30 million of international expenditures and \$25 million for propane and other.

Oil and Gas group 1991 Drilling Statistics

	Gross	Net
Exploratory Drilling		
Oil and heavy oil wells	39	17
Gas wells	75	41
Dry and abandoned wells	106	53
	220	111
Development Drilling		
Oil and heavy oil wells	109	46
Gas wells	146	70
Dry and abandoned wells	31	13
	286	129

Oil and Gas group 1991 Land Holdings

(000 acres)	Developed		Undeveloped	
	Gross	Net	Gross	Net
Canada	6,486	2,748	14,822	6,848
United States	54	24	1,223	768
Australia	431	48	5,607	1,641
New Zealand	86	17	384	91
Other	1	0	25,748	7,914
Total	7,058	2,837	47,784	17,262

Liquidity and Capital Resources

Noranda's lower profitability in 1991, partially offset by forward gas sales and reductions in working capital balances, reduced cash realized from operations to \$530 million, compared with \$1,007 million in 1990.

Capital Spending

Spending on capital assets and other investment activities totalled \$931 million, \$782 million less than in 1990. Asset sales, including proceeds from the sale of Canada Wire and Cable, reduced the net capital outlay to \$448 million.

Capital expenditures by Canadian Hunter and North Canadian Oils on energy exploration and development were reduced to \$250 million in 1991 from \$325 million in 1990.

New investments in 1991 were restricted principally to the completion of projects to which commitments had previously been made and to those required to meet new environmental standards or maintain essential production. Exceptions were the further investment in Louvem of \$35 million to bring ownership to 53%, the \$32 million acquisition of Amoco's Elmworth gas properties, continued development of Falconbridge's Raglan project at \$14 million, the

New World project at \$22 million and \$41 million for Noranda Forest's 50% share of Rustad Bros. & Co. Ltd.

Financing

Dividends paid to common, preferred and minority shareholders totalled \$341 million in 1991, bringing the net cash shortage before financing activities to \$259 million. This was covered by drawing on bank lines of credit and by share issues by Noranda Forest and MacMillan Bloedel. At December 31, 1991 Noranda's lines of credit were \$3.9 billion of which \$1.8 billion was drawn and \$2.1 billion was available.

It is Noranda's policy to manage its affairs so as to be able to pay common share dividends on a regular basis, through good times and bad. While it has not been appropriate or prudent to increase this dividend since 1988, it is Noranda's intention to continue this policy.

In February 1992, Noranda sold 9,000,000 common shares of Hemlo Gold Mines Inc. for net proceeds of \$95 million, leaving Noranda with 46% of Hemlo's outstanding shares.

Outlook

At December 31, 1991, the ratio

of Noranda's consolidated net debt to equity and minority interest was 0.68:1, an increase from 0.63:1 at the end of 1990. Noranda is targeting to maintain its debt position at current levels. This is expected to be accomplished through improvement in operating cash flow in the latter half of 1992 along with the continuing deferral of capital expenditures, the sale of non-strategic assets and continuing efforts to reduce working capital. Operating cash flow should continue to benefit from reductions in operating costs, increased productivity and more focused exploration efforts. Furthermore, the plant closures and other restructurings that have taken place in 1991 are expected to have a positive impact on 1992 earnings. A lower Canadian dollar compared to 1991's average of \$.87 would have a positive impact on net earnings and cash flow.

In 1991, the former centrally planned economies of Eastern Europe were unable to provide adequate demand for domestically produced natural resources. This, combined with the desire for foreign exchange, resulted in unusually high sales volumes into Western markets, bringing

about an overall drop in world commodity prices.

Noranda may continue to face this competition until Eastern Europe economies find effective ways to consume their own natural resources and until worldwide demand for Noranda's products resumes reasonable growth. Producer discipline, inventory reductions and improved demand could help to draw some prices upward in 1992 from their current depressed levels. As can be noted from a review of the sensitivity chart on page 15, which shows the impact on Noranda's earnings of a 10% change in the price of our major products, a gradual price increase over a range of products can produce a dramatic change in earnings. Over the longer term it is anticipated that demand for Noranda products will continue to grow in order to meet society's needs.

At December 31, 1991, 72% of consolidated net debt was at floating rates tied to Canadian and international money market rates. The downward movement in interest rates, which is expected to continue, will contribute favourably to the manageability of debt. While Noranda remains in

the market for high grade, easily accessible low-cost resource assets and production facilities, no major acquisitions are presently planned for 1992. Capital expenditures, including continued development work by Falconbridge, Hemlo and Louvem and required spending by Noranda Forest, are expected to be the same as 1991.

Any cash shortfall after net capital expenditures and dividends is expected to be financed by increased borrowing under existing lines of credit, public debt issues, reductions in marketable securities, asset sales and, if market circumstances permit, further common share issues by the public companies in the Noranda Group.

Environment

Noranda is committed to a program of protection of the environment and has spent, and will continue to spend, substantial amounts on research and new equipment to maintain and improve its environmental record. In addition, at December 31, 1991, Noranda has provided \$134 million in its accounts for future site restoration and closure costs. Environmental capital expenditures projected for 1992 are in the range of \$190 million, while

minesite reclamation provisions will increase by approximately \$35 million. More environmentally responsive processes and products being sought by Noranda and its customers will likely result in higher costs that will ultimately need to be shared. There can be no assurance that these changes along with future changes in regulations and in the standards Noranda establishes for itself will not have a substantial impact on future operating costs.

Basis of Presentation of the Consolidated Financial Statements

The accompanying consolidated financial statements are prepared in accordance with accounting principles generally accepted in Canada and include the accounts of Noranda Inc. (the "Company") and all of its subsidiaries ("Noranda"). Long-term investments in associated companies in which Noranda has significant influence are accounted for on the basis of cost plus equity in undistributed earnings since the dates of investment. The Company's 50% interest in Falconbridge Limited ("Falconbridge") and Noranda Forest Inc.'s ("Noranda Forest") 50% interests in two joint ventures are proportionately consolidated. The difference between the cost of the shares of associated companies and the underlying net book value of the assets is amortized over the life of the assets to which the difference is attributed.

A partially-owned subsidiary owns shares in the Company. The Company's pro rata interest in the carrying value of such shares has been deducted from shareholders' equity. Similarly, the Company's earnings per common share have been calculated on the number of common shares outstanding after reduction for such intercompany holdings.

Translation of Foreign Currencies

The accounts of self-sustaining foreign operations are translated using the current rate method, under which all assets and liabilities are translated at the exchange rate prevailing at the year end, and revenues and expenses at average rates of exchange during the year. Gains or losses on translation of these account balances are not included in the Consolidated Statements of Earnings but are deferred and shown as a separate item in shareholders' equity. Gains or losses on foreign currency loans and deposits, and transactions that are designated as hedges of a net investment in self-sustaining foreign operations, are reported in the same manner as translation adjustments.

Foreign denominated monetary assets and liabilities of Canadian operations and integrated foreign operations are translated at the exchange rate prevailing at the year end and revenues and expenses (other than depreciation) at average rates of exchange during the year. Exchange gains and losses arising on the translation of the accounts are included in consolidated earnings. Non-monetary assets and liabilities are translated at historical rates of exchange. Long-term debt payable in foreign currencies is translated at the

exchange rate prevailing at the year end with the resulting adjustment being amortized over the life of the debt.

Inventories

Mine products are valued at estimated current realizable values except for a portion of the in-process smelter and refinery inventories of copper, zinc and precious metals. These base stock amounts, required to maintain the continuous smelting and refining process, are valued at cost. Aluminum and fabricated product inventories are valued at the lower of cost (determined on a first-in first-out basis) and net realizable value.

Forest product inventories of manufactured products are valued at the lower of average cost and net realizable value.

Inventories of operating supplies and raw materials are valued at the lower of average cost and replacement value.

Futures and Forward Contracts

From time to time, Noranda enters into futures contracts for the purchase or sale of commodities and currencies not related to production. Provisions are made for any estimated unrealized gains and losses.

Depreciation and Amortization

Depreciation of property, plant and equipment is based on the estimated service lives of the assets calculated primarily on the straight-line basis, except for the unit of production method for forest manufacturing assets. Preproduction and mine development expenditures are amortized over the estimated life of the mine on the unit of production method.

Provisions are made for future site restoration and closure costs net of expected recoveries, in a rational and systematic manner, by charges to earnings over the expected life of operations.

Exploration

Mining exploration expenditures are charged against current earnings unless they relate to properties from which a productive result is reasonably certain. Gains on sale of mining exploration properties or recoveries of costs previously written off are credited against exploration expense.

For oil and gas exploration expenditures, Noranda follows the full cost method of accounting whereby all costs associated with the exploration for and development of oil and gas reserves, whether productive or unproductive, are capitalized in cost centres on a country-by-country basis and charged against earnings as set out

below. Such costs include land acquisition, drilling, geological and geophysical, and overhead expenses related to exploration and development activities.

Depletion is provided on costs accumulated in producing cost centres using the unit of production method based on estimated proved oil and gas reserves converted to a common unit of measure. Proceeds on sale of energy properties are credited to asset costs.

The carrying value of Noranda's oil and gas investments in producing cost centres is limited to an ultimate recoverable amount which is the aggregate of future net undiscounted revenues from proved reserves based upon period end constant prices and costs, and the costs of unproven properties, net of impairment allowances, less future general and administrative costs, financing costs and income taxes.

Income Taxes

Noranda follows the deferral method of tax allocation in accounting for income taxes. Under this method, timing differences between reported and taxable income result in provisions for taxes which are not currently payable at rates in effect in the year of the difference. Such timing differences arise principally as a result of claiming depreciation, development, exploration and

preproduction costs for tax purposes in the year at amounts differing from those charged to reported earnings. The accumulated balance is not adjusted for subsequent changes in tax rates.

Interest

Interest expense is charged to earnings except for interest that can be identified with a major capital expenditure program, which is capitalized.

Pension Costs

Noranda uses the accrued benefit actuarial method and best estimate assumptions to value benefit obligations. Adjustments arising from plan amendments, experience gains and losses and changes in assumptions are amortized over the estimated average remaining service lives of the employee groups. Current service costs are expensed in the year. Market-related asset values are determined on a five-year average basis.

Consolidated Balance Sheets

Noranda Inc. (Incorporated under the laws of Ontario)

Assets

As at December 31 (millions)	1991	1990
Current assets		
Cash and securities [note 1]	\$ 861	\$ 795
Accounts, advances and tolls receivable	1,742	1,687
Inventories	1,519	1,758
	4,122	4,240
Investments in and advances to associated and other companies [note 4]	1,869	1,763
Capital assets [note 2]	8,528	8,851
Other assets	64	63
	\$14,583	\$14,917

Liabilities and Shareholders' Equity

Current liabilities		
Bank advances	\$ 576	\$ 587
Accounts payable	1,412	1,419
Taxes payable	40	95
Debt due within one year	245	125
	2,273	2,226
Long-term debt [note 5]	4,541	4,522
Deferred taxes, revenues and other liabilities [note 6]	1,128	1,171
Minority interests in subsidiaries [note 8]	2,187	2,175
Convertible debentures [note 9]	150	150
Shareholders' equity [note 10]	4,304	4,673
	\$14,583	\$14,917

(See accompanying notes)

On behalf of the Board:



Alfred Powis, Director



David Kerr, Director

Consolidated Statements of Earnings and Retained Earnings

Earnings

Years ended December 31 (millions)	1991	1990
Revenue		
Sales	\$ 8,229	\$ 9,434
Investment income	48	34
Share of earnings in associates	63	97
Gain on the sale of assets	120	—
	8,460	9,565
Expense		
Cost of sales and administration	7,388	7,849
Depreciation, depletion and amortization	828	820
Mining exploration	130	119
Interest, net [note 5]	450	493
Income and production taxes (recovery) [note 11]	(135)	104
Minority interests in earnings (losses) of subsidiaries	(68)	60
	8,593	9,445
Earnings (loss)	\$ (133)	\$ 120
Earnings (loss) per common share	\$ (1.04)	\$ 0.36

Retained Earnings

Balance, beginning of year	\$ 1,354	\$ 1,473
Earnings (loss)	(133)	120
	1,221	1,593
Dividends [note 10]	(247)	(239)
Balance, end of year	\$ 974	\$ 1,354

(See accompanying notes)

Auditors' Report

To the Shareholders of Noranda Inc.:

We have audited the consolidated balance sheets of Noranda Inc. as at December 31, 1991 and 1990 and the consolidated statements of earnings and retained earnings and changes in financial position for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of Noranda Inc. as at December 31, 1991 and 1990 and the results of its operations and the changes in its financial position for the years then ended in accordance with generally accepted accounting principles.

Ernst + Young

Chartered Accountants

Toronto, Canada
February 6, 1992

Consolidated Statements of Changes in Financial Position

Years ended December 31
(millions)

1991

1990

Cash realized from (used for) operations:

Earnings (loss)	\$ (133)	\$ 120
Charges (credits) not affecting cash:		
Depreciation, depletion and amortization	828	820
Deferred exploration written off	31	17
Gain on the sale of assets	(120)	—
Deferred taxes	(159)	(19)
Minority interests in earnings (losses) of subsidiaries	(68)	60
Earnings in associates net of dividends received	(4)	(52)
Forward gas sales and other	141	57
	516	1,003
Net change in accounts receivable, inventories and payables	14	4
	530	1,007

Cash realized from (used for) investment activities:

Property, plant and equipment, net	(718)	(1,266)
Deferred expenditures	(93)	(107)
Investments and advances	(120)	(340)
	(931)	(1,713)
Sale of assets	483	263
	(448)	(1,450)

Cash provided (used) before financing activities and dividends	82	(443)
--	----	-------

Cash realized from (used for) financing activities:

Long-term debt	195	539
Common shares issued	12	58
Issue of shares - minority shareholders, net	129	26
Preferred shares issued [note 10(d)]	—	250
Norcen debentures acquired [note 10(d)]	—	(250)
	336	623

Dividends

Shareholders	(247)	(239)
Minority shareholders of subsidiaries	(94)	(116)
	(341)	(355)

Cash increase (decrease)	77	(175)
Cash, beginning of year	208	383
Cash, end of year	\$ 285	\$ 208

Cash comprises cash and securities less bank advances.

(See accompanying notes)

December 31, 1991

(\$ millions except as otherwise indicated)

Accounting policies

The principal accounting policies followed by Noranda are summarized under the caption "Accounting Policies". With the sale of Canada Wire and Cable in 1991, Noranda has concluded that its operations are more effectively viewed as comprising three major segments: Mining and Metals including base and precious metal mining, copper, zinc, nickel and aluminum metallurgical facilities, and the related downstream aluminum and steel wire rope manufacturing facilities; Forest Products including pulp, paper and lumber products of all types; and Oil and Gas. The 1991 and 1990 financial information has been presented in a manner consistent with this view.

Certain of the 1990 balances have been reclassified to conform to the presentation adopted in the current year.

1. Cash and securities

The market value of cash and securities as at December 31, 1991 was \$865 (1990 - \$798). [note 12(d)]

2. Capital assets

As at December 31, 1991	Mining and Metals	Forest Products	Oil and Gas	Corporate	Total
Property, plant and equipment, at cost	\$ 5,295	6,320	2,696	55	\$14,366
Accumulated depreciation	(2,692)	(2,681)	(1,078)	(17)	(6,468)
	2,603	3,639	1,618	38	7,898
Deferred preproduction and development	568	—	—	—	568
Deferred exploration	62	—	—	—	62
	\$ 3,233	3,639	1,618	38	\$ 8,528
As at December 31, 1990	Mining and Metals	Forest Products	Oil and Gas	Corporate	Total
Property, plant and equipment, at cost	\$ 5,450	6,371	2,468	47	\$14,336
Accumulated depreciation	(2,606)	(2,502)	(889)	(16)	(6,013)
	2,844	3,869	1,579	31	8,323
Deferred preproduction and development	505	—	—	—	505
Deferred exploration	23	—	—	—	23
	\$ 3,372	3,869	1,579	31	\$ 8,851

Capital assets include \$461 of deferred preproduction and development, construction in progress and unproved properties as at December 31, 1991 that are not currently being amortized, depreciated or depleted (1990 - \$480).

3. Joint ventures

Noranda's share of the assets and liabilities and revenues and expenses of major joint ventures for the years ended December 31, 1991 and 1990 are as follows:

Balance Sheets	Falconbridge		Noranda Forest Joint Ventures		Total	
	1991	1990	1991	1990	1991	1990
Current assets	\$ 387	\$ 363	\$ 97	\$ 73	\$ 484	\$ 436
Investments and other	—	7	3	2	3	9
Capital assets	1,218	1,220	242	217	1,460	1,437
	\$1,605	\$1,590	\$ 342	\$ 292	\$1,947	\$1,882
Current liabilities	\$ 156	\$ 93	\$ 103	\$ 65	\$ 259	\$ 158
Long-term debt	919	977	117	78	1,036	1,055
Deferred taxes, revenues and other liabilities	183	203	52	52	235	255
Minority interests in subsidiaries	16	16	13	18	29	34
Shareholders' equity	331	301	57	79	388	380
	\$1,605	\$1,590	\$ 342	\$ 292	\$1,947	\$1,882
Statements of Earnings						
Sales and other revenues	\$ 851	\$ 998	\$ 244	\$ 257	\$1,095	\$1,255
Expenses	788	858	256	237	1,044	1,095
Minority interests in earnings (losses) of subsidiaries	—	—	(2)	4	(2)	4
Operating earnings (loss)	\$ 63	\$ 140	\$ (10)	\$ 16	\$ 53	\$ 156

The total unamortized cost of Noranda's investment in Falconbridge exceeds Noranda's interest in the book value of the underlying assets by \$223 and is being amortized over the estimated life of such assets.

4. Investments

Investments in and advances to associated and other companies consist of:

Associated companies carried on an equity basis	Ownership Interest	Carrying Value	
		1991	1990
Anderson Exploration Ltd.	30%	\$ 88	\$ 89
Norcen Energy Resources Limited [note 4(b)]	33%	749	756
Associated forest companies - KNP	30%	385	364
- Trus Joist MacMillan [note 4(c)]	49%	176	—
- Other		230	222
Other companies		84	39
		1,712	1,470
Other investments and advances, at cost			
Shares		71	144
Advances and notes receivable		86	149
		157	293
		\$ 1,869	\$ 1,763

4. Investments (continued)

(a) Included are shares and convertible subordinated debentures carried at a book value of \$1,312 which had a quoted market value of \$1,465 at December 31, 1991 (\$1,370 and \$1,471 respectively, at December 31, 1990). The latter amount does not necessarily represent the value of these holdings which may be more or less than that indicated by market quotations.

(b) Noranda holds a 33% equity interest and \$370 convertible subordinated debentures of Norcen Energy Resources Limited ("Norcen") representing an effective equity interest of 43% and voting interest of 48% on a fully-diluted basis.

(c) Effective October 1, 1991 MacMillan Bloedel Limited ("MacMillan") agreed with TJ International Inc. to form Trus Joist MacMillan, a Limited Partnership, to manufacture and distribute engineered wood products. MacMillan contributed three engineered wood products divisions as its equity investment.

5. Debt

	Weighted average interest rates as at December 31, 1991	1991	Principal repayments as at December 31, 1991							1990
			1992	1993	1994	1995	1996	1997 to 2001	There- after	
Debt of the Company and 100% subsidiaries:										
Notes payable and revolving term loans	8.07%	\$ 452	—	—	—	452	—	—	\$ —	\$ 700
Senior debentures	6.35%	455	30	—	13	—	312	100	—	175
Other debt	7.09%	171	15	15	7	12	2	10	110	186
	7.19%	1,078	45	15	20	464	314	110	110	1,061
Debt of partially-owned subsidiaries within:										
Mining and Metals	8.04%	1,159	112	156	110	147	134	500	—	1,168
Forest Products	8.66%	2,371	88	147	223	859	276	727	51	2,178
Oil and Gas	9.23%	178	—	—	70	—	—	108	—	240
	8.50%	3,708	200	303	403	1,006	410	1,335	51	3,586
	8.20%	4,786	245	318	423	1,470	724	1,445	\$ 161	4,647
Debt due within one year		245								125
Long-term debt		\$4,541								\$4,522

Notes payable include short-term money market borrowings supported by revolving term loan arrangements that are structured to provide the Company the right to borrow at floating rates and repay these amounts on January 1, 1995.

Senior debentures are direct unsecured obligations of Noranda, for the most part bearing interest at floating rates tied to quoted money market rates.

Other debt includes secured notes, pollution control bonds,

municipal industrial revenue bonds, capital leases and other miscellaneous obligations.

Long-term debt includes \$1,122 (1990 - \$1,127) of partially-owned subsidiaries' debt repayable in United States dollars and \$146 (1990 - \$170) of partially-owned subsidiary debt repayable in Dutch Guilders of 215G (1990 - 247G).

Long-term interest expense for the year was \$466 (1990 - \$503). Interest capitalized on major capital expenditures amounted to

\$11 (1990 - \$26).

With respect to debt of partially-owned subsidiaries, the Company has guaranteed US\$475 of the U.S. dollar borrowings of Falconbridge Inc. and under certain circumstances is contingently liable for a further Cdn \$23 debt of Falconbridge Inc.

Included in debt of partially-owned subsidiaries at December 31, 1991 is \$106 (1990 - \$122) representing amounts due with respect to forward gold sales at Cdn \$543.63 per ounce.

6. Deferred taxes, revenues and other liabilities

	1991	1990
Deferred taxes	\$ 726	\$ 925
Deferred revenues and other liabilities	402	246
	<u>\$1,128</u>	<u>\$1,171</u>

7. Commitments and contingency

(a) The Company's future minimum lease payments on operating leases as at December 31, 1991 are as follows:

1992	\$ 82
1993	54
1994	42
1995	34
1996	30
Thereafter	185
Total future minimum lease payments	<u>\$427</u>

(b) In 1990, the Company sold Carol Cable Company, Inc. ("Carol"). In November 1991, the Company initiated legal action against the purchaser of Carol and was in turn, subject to counterclaims involving certain matters related to the sale of Carol. The Company is vigorously contesting these counterclaims and believes its defences to these actions to be meritorious.

8. Minority interests in subsidiaries

	1991	1990
Convertible subordinated debentures	\$ 215	\$ 215
Preferred shares of subsidiaries	281	296
Common equity interests	1,691	1,664
	<u>\$2,187</u>	<u>\$2,175</u>

MacMillan and Minnova Inc. ("Minnova") have adjustable rate convertible subordinated debentures due 2007 outstanding for \$150 and \$65 respectively at an interest rate which is the greater of 5%, or 1% plus the percentage that two times the common share dividend paid in the previous six months is of the conversion price. The characteristics and attributes attaching to these convertible subordinated debentures, including MacMillan's and Minnova's options to require the trustee to apply the proceeds of redemption of the debentures at maturity to subscribe for and purchase common shares, causes these companies to view these securities as permanent capital. Consequently these debentures are included with minority interest.

9. Convertible debentures

The \$150 adjustable rate convertible subordinated debentures, Series 1, due April 30, 2007, bear interest at a rate which is the greater of 5%, or 1% plus the percentage that two times the common share dividend paid in the previous six months is of the conversion price. Subject to certain conditions, the Company may satisfy the interest requirement through the issue of common shares. The debentures are convertible at the holder's option into common shares of the Company at a conversion price of \$35.00 per common share, on or before the last business day prior to the maturity date of the debentures or the last business day prior to redemption. The Company has the option of redeeming the debentures after May 1, 1992 and upon maturity they are redeemable, at the Company's option, for common shares of the Company. The characteristics and attributes attaching to the convertible subordinated debentures, including the Company's option to require the trustee to apply the proceeds of redemption of the debentures at maturity to subscribe for and purchase common shares, causes the Company to view these securities as permanent capital.

10. Shareholders' equity

Capital stock

Authorized:

- Preferred shares, an unlimited number
- Common shares, an unlimited number
- Participating shares, an unlimited number

Issued:			Dividends Declared	
	1991	1990	1991	1990
Series B Preferred shares [note 10(a)]	\$ 52	\$ 52	\$ 4	\$ 5
Series C Preferred shares [note 10(b)]	442	442	34	34
Series D Preferred shares [note 10(c)]	100	100	8	8
Series E Preferred shares [note 10(d)]	250	250	15	7
Common shares[note 10(e)]	2,537	2,525	190	189
	3,381	3,369	251	243
Retained earnings	974	1,354		
	4,355	4,723		
Currency translation adjustment	4	5		
Less the Company's pro rata interest in its shares held by a subsidiary	55	55	4	4
	\$ 4,304	\$ 4,673	\$ 247	\$ 239

(a) Preferred shares Series B

The Company had 1,998,576 (1990 - 1,998,576) preferred shares outstanding at December 31, 1991 which were designated fixed/floating rate, cumulative, redeemable, retractable, convertible preferred shares Series B. Holders are entitled to dividends at the rate of 72% of prime with a minimum of 7% and a maximum of 12%.

Upon payment of \$2.7785, each share is convertible into 1.3 common shares of the Company until July 15, 1995 at the conversion price of \$22.1373. The Company may redeem these shares at prices ranging from \$26.50 in 1992 to \$26.00 after 1994. Redemption prior to July 15, 1992 is subject to certain conversion provisions. Shareholders may

require the Company to redeem shares at \$26.00 on July 15, 1995.

(b) Preferred shares Series C

The Company had 17,642,796 (1990 - 17,642,796) preferred shares outstanding at December 31, 1991 which were designated as 7 3/4% cumulative, redeemable, convertible preferred shares Series C.

Each share is convertible into 1.15 common shares of the Company until June 15, 1993 at a conversion price of \$21.74. The shares are redeemable at the option of the Company at a price of \$25.00 together with all unpaid dividends.

(c) Preferred shares Series D

The Company has 200 (1990 - 200) cumulative, redeemable, auction perpetual preferred shares

Series D outstanding at December 31, 1991. Holders are entitled to dividends at a fixed rate of 8% until March 31, 1994. Thereafter the dividend rate will be determined by negotiation with investors, solicitation of bids from investment dealers, or auction. On or after March 31, 1994 the shares are redeemable, at the Company's option, at par together with all unpaid dividends.

(d) Preferred shares Series E

On July 23, 1990, the Company issued 12,500,000 cumulative, convertible, redeemable, retractable preferred shares Series E to a related company as consideration paid for the purchase of \$250, 8% Norcen Series C convertible subordinated debentures. Holders are entitled to dividends at a fixed rate of 6% and may convert into common shares of the Company at any time before November 30, 1999, at \$20 per common share. The Company may redeem the preferred shares Series E after November 30, 1994 at \$20 per share. On November 30, 1999, the shares will be redeemed by the Company at \$20 per share, or, at the Company's option, through the issue of common shares at their then market value.

(note 10 continued on following page)

10. Shareholders' equity (continued)**(e) Summary of common share transactions**

	Shares (in thousands)	Amount
Common shares, January 1, 1990	187,265	\$ 2,467
Issued:		
As stock dividends	2,545	50
Under share purchase plan	472	8
Under stock option plan	10	—
Common shares, December 31, 1990	190,292	2,525
Issued:		
As stock dividends	616	12
Under stock option plan	24	—
Common shares, December 31, 1991	190,932	2,537
Less the Company's pro rata interest in 7,361,281 of its common shares held by a subsidiary	3,766	.55
Net common shares	187,166	\$ 2,482

The earnings per common share calculations have been based on the weighted average number of common shares outstanding, 186,796,329 in 1991 and 185,492,716 in 1990.

(f) Stock options

During the year ended December 31, 1991, 24,300 (1990 - 9,840) common shares were issued under the Company's stock option plan at an average exercise price of \$14.57 per share. During the year, the Company issued options on 84,350 common shares, exercisable at prices ranging from \$17.90 to \$18.38 per share for periods up to 1996. At December 31, 1991 options on 1,005,628 shares were outstanding and exercisable at prices varying from \$14.50 to \$18.78 for periods up to 1996.

(g) Share purchase plan

Under the Company's share purchase plan, shares are sold to a trustee for resale to employees, financed by a loan from the Company. At December 31, 1991, the amount of the loan included in accounts receivable was \$36 (1990 - \$38), of which \$2 (1990 - \$3) is interest free and \$34 (1990 - \$35) bears interest at an amount equal to the dividend paid on the common share.

(h) Purchases for cancellation

Shareholders have the right to receive either cash dividends or the equivalent in common shares. Under an exemption order of the Ontario Securities Commission the Company may, subject to certain conditions, purchase for cancellation on an annual basis through the facilities of The Toronto Stock Exchange a number of common shares approximately corresponding in number to the common shares issued by it as stock dividends. During 1991, 615,253 (1990 - 2,544,566) common shares were issued as stock dividends. No shares were purchased for cancellation under this arrangement during 1991 (1990 - nil).

11. Income and production taxes (recovery)

The provision for (recovery of) income and production taxes differs from the amount that would have resulted by applying statutory income tax rates to earnings (losses) as described below. The difference arose for the following reasons:

	1991	1990
Earnings (loss) before the following:		
Income and production taxes, share of earnings in associates, and minority interests in earnings (losses) of subsidiaries	\$ (399)	\$ 187
Provision (recovery) based on combined federal and composite provincial tax rate of 44.3% (1990 - 43.9%)	\$ (177)	\$ 82
Increase (decrease) in taxes resulting from:		
Resource and depletion allowances	(41)	(88)
Royalties and mineral taxes	25	87
Non-recurring and other	58	23
Income and production taxes (recovery)	\$ (135)	\$ 104

12. Related party transactions

Related party transactions during the year between Noranda and its associated companies and affiliates are summarized below:

(a) Sales of goods and services, consisting of pulp and container board at market prices on normal trade terms, amounted to \$116 and gave rise to accounts receivable at December 31, 1991 of \$32 (1990 - \$120 and \$19 respectively).

(b) Purchases of goods and services, consisting of lumber and alumina at market prices on normal trade terms, amounted to \$78 and gave rise to accounts payable at December 31, 1991 of \$9 (1990 - \$93 and \$1 respectively).

(c) Noranda arranges financing transactions with affiliates and

associates from time to time at market interest rates. In 1991, Noranda paid interest in the amount of \$7 (1990 - \$8) on loans from affiliates and associates of \$55 (1990 - \$56) outstanding at year end and earned interest in the amount of \$2 (1990 - \$3) on amounts receivable from affiliates and associates of \$16 (1990 - \$22) outstanding at year end.

Included in accounts receivable are notes receivable in respect of shares of subsidiaries purchased under share purchase plans by certain officers of subsidiaries of the Company in the amount of \$35 at December 31, 1991 (1990 - \$35).

(d) Noranda has various portfolio investments in affiliates acquired under normal market terms. At

December 31, 1991, securities included investments in affiliates in the amount of \$352 (1990 - \$324). Dividends received from such investments totalled \$26 (1990 - \$30). [note 1]

(e) In January 1990, North Canadian Oils Limited acquired from a related company, security investments in Coseka Resources Limited valued at \$18 in consideration for the issue of 900,000 common shares of North Canadian Oils.

13. Pension plans

Noranda has a number of pension plans, participation in which is available to substantially all employees after one or two years of continuous service. The hourly employees are generally members of negotiated plans where the benefits are specified by collective agreements.

Actuarial reports prepared for the pension plans, which were based on projections of interest, employees' compensation levels and length of service to the time of retirement, indicate that the approximate present value of accrued benefits at December 31, 1991 was \$1,554 (1990 - \$1,458). The pension fund assets at market-related values, at December 31, 1991 were \$1,417 (1990 - \$1,397).

14. Business segment information

Noranda operates in three industry segments: mining and metals, forest products and oil and gas. Inter-segment sales and purchases are made at market prices and trade terms. Operations and identifiable assets by industry and geographic segments are presented below:

(a) Industry segments

Operations:	Mining and Metals	Forest Products	Oil and Gas	Corporate and Inter-segment	Total
Year ended 1991					
Sales	\$ 3,810	4,118	311	(10)	\$ 8,229
Gain on the sale of operating assets	6	13	—	—	19
Share of earnings in associates	(1)	41	22	1	63
	3,815	4,172	333	(9)	8,311
Cost of sales and administration	3,184	4,082	112	10	7,388
Depreciation, depletion and amortization	350	281	190	7	828
Mining exploration	130	—	—	—	130
Income and production taxes (recovery)	87	(85)	11	(11)	2
Minority interests	(2)	(31)	9	—	(24)
Segment earnings (loss)	\$ 66	(75)	11	(15)	\$ (13)
Interest expense, net					(450)
Investment income					48
Gain on the sale of assets					101
Income tax recovery					137
Minority interests					44
Earnings (loss)					\$ (133)
Capital expenditures	\$ 303	284	250	27	\$ 864

Operations:	Mining and Metals	Forest Products	Oil and Gas	Corporate and Inter-segment	Total
Year ended 1990					
Sales	\$ 4,567	4,555	317	(5)	\$ 9,434
Gain (loss) on the sale of operating assets	3	(8)	—	—	(5)
Share of earnings in associates	3	46	47	1	97
	4,573	4,593	364	(4)	9,526
Cost of sales and administration	3,524	4,232	77	16	7,849
Depreciation, depletion and amortization	357	270	187	6	820
Mining exploration	119	—	—	—	119
Income and production taxes (recovery)	239	22	31	(12)	280
Minority interests	33	53	10	—	96
Segment earnings (loss)	\$ 301	16	59	(14)	\$ 362
Interest expense, net					(493)
Investment income					39
Income tax recovery					176
Minority interests					36
Earnings					\$ 120
Capital expenditures	\$ 498	569	325	15	\$ 1,407

(b) Geographic segments

Operations:	Mining and Metals	Forest Products	Oil and Gas	Corporate and Inter-segment	Total
Year ended 1991					
Revenue:					
Canada — Domestic	\$ 961	1,019	277	—	\$ 2,257
— Export	1,239	2,032	18	—	3,289
	2,200	3,051	295	—	5,546
U.S.	1,492	1,576	32	—	3,100
Other	123	517	6	—	646
	3,815	5,144	333	—	9,292
Inter-segment	—	(972)	—	(9)	(981)
	\$ 3,815	4,172	333	(9)	\$ 8,311
Investment income					48
Gain on the sale of assets					101
Total					\$ 8,460
Segment earnings (loss):					
Canada	\$ 11	(83)	48	(18)	\$ (42)
U.S.	51	(7)	(39)	3	8
Other	4	15	2	—	21
Total	\$ 66	(75)	11	(15)	\$ (13)
Total assets employed:					
Canada	\$ 3,654	3,837	2,516	171	\$10,178
U.S.	1,081	1,365	119	(9)	2,556
Other	383	596	9	—	988
	\$ 5,118	5,798	2,644	162	\$13,722
Cash and securities					861
Total					\$14,583

Operations:	Mining and Metals	Forest Products	Oil and Gas	Corporate and Inter-segment	Total
Year ended 1990					
Revenue:					
Canada — Domestic	\$ 1,344	1,101	346	1	\$ 2,792
— Export	1,485	2,319	—	—	3,804
	2,829	3,420	346	1	6,596
U.S.	1,614	1,808	9	—	3,431
Other	130	561	9	—	700
	4,573	5,789	364	1	10,727
Inter-segment	—	(1,196)	—	(5)	(1,201)
	\$ 4,573	4,593	364	(4)	\$ 9,526
Investment income					39
Total					\$ 9,565
Segment earnings (loss):					
Canada	\$ 222	14	93	(11)	\$ 318
U.S.	70	(18)	(37)	(3)	12
Other	9	20	3	—	32
Total	\$ 301	16	59	(14)	\$ 362
Total assets employed:					
Canada	\$ 3,913	4,037	2,498	169	\$10,617
U.S.	1,178	1,282	126	(9)	2,577
Other	365	552	11	—	928
	\$ 5,456	5,871	2,635	160	\$14,122
Cash and securities					795
Total					\$14,917

Board of Directors

Noranda's Board of Directors consists of 17 members, who meet a minimum of four times a year. Their average age is 60 and their average length of service as a Director to Noranda is 11 years.

Committees of the Board

Executive Committee (1)

The Executive Committee acts on matters delegated to it by the Board and at times deals with urgent matters on short notice. The committee has 9 members and met twice in 1991.

Audit Committee (2)

The Audit Committee's responsibilities include reviewing the annual financial statements, accounting policies and procedures, results of external audits and related matters, and evaluating internal control processes and the performance of the Company's auditors. The committee has 6 members and met twice in 1991.

Human Resources and Compensation Committee (3)

The Human Resources and Compensation Committee reviews the performance and compensation of senior management and ensures that appropriate succession plans are in place. The committee has 5 members and met twice in 1991.

Environmental Committee (4)

The Environmental Committee is responsible for ensuring that Noranda's environmental management system is properly implemented throughout the company. The committee has 5 members and met three times in 1991.

Directors

André Bérard (2)

*Chairman and Chief Executive Officer
National Bank of Canada
Montreal
Age: 51 Director: 2 years*

Peter F. Bronfman (4)

*Chairman
Edper Enterprises Limited
Toronto
Age: 62 Director: 4 years*

Jack L. Cockwell (1,3)

*President
Brascan Limited
Toronto
Age: 50 Director: 10 years*

René Dufour (4)

*Professor
Mineral Engineering Department
Ecole Polytechnique
Montreal
Age: 60 Director: 3 years*

The Honourable J. Trevor Eyton, O.C., Q.C. (1,3)

*Chairman
Brascan Limited
Member of The Senate of Canada
Toronto
Age: 57 Director: 10 years*

David W. Kerr (1)

*President and Chief Executive Officer
Noranda Inc.
Toronto
Age: 48 Director: 4 years*

Willard J. L'Heureux, Q.C. (1,2)

*President and Managing Partner
Hees International Bancorp Inc.
Toronto
Age: 44 Director: 2 years*

Paul M. Marshall (2)

*Vice-Chairman, Brascan Limited
Toronto
Age: 68 Director: 10 years*

David E. Mitchell, O.C. (4)

*President and Chief Executive Officer
Alberta Energy Company Ltd.
Calgary
Age: 65 Director: 18 years*

André Monast, Q.C. (1,3)

*Partner
Stein, Monast, Pratte and Marseille
Quebec
Age: 67 Director: 25 years*

Donald S. McGiverin (2,4)

*Governor and Chairman
Hudson's Bay Company
Toronto
Age: 67 Director: 11 years*

W. Darcy McKeough (1,2)

*Company Director
Chatham
Age: 58 Director: 12 years*

Alfred Powis, O.C. (1,3)

*Chairman
Noranda Inc.
Toronto
Age: 61 Director: 27 years*

Martin D. Walker

*Chairman and Chief Executive Officer
M.A. Hanna Company
Cleveland
Age: 59 Director: 1 year*

H. Richard Whittall (3)

*Corporate Director
Vancouver
Age: 68 Director: 9 years*

William P. Wilder (1,2)

*Corporate Director
Toronto
Age: 69 Director: 25 years*

Adam H. Zimmerman, F.C.A. (1,4)

*Chairman
Noranda Forest Inc.
Vice-Chairman
Noranda Inc.
Toronto
Age: 64 Director: 17 years*

Honorary Directors

J. W. (Bud) Bird

James C. Dudley

A. O. Dufresne

Brian Flemming

Denis S. Giroux

Louis Hébert

William James

Pierre Lamy

A.J. (Pete) Little

Leonard G. Lumbers

Thomas H. McClelland

Bernard A. Roy

Antoine Turmel

Harold M. Wright

Officers

Principal Officers

Noranda Inc. has 15 principal officers whose average age is 54. Their average length of service is 19 years.

Alfred Powis

Chairman

Age: 61 Employee: 36 years

Adam H. Zimmerman

Vice-Chairman

Age: 64 Employee: 33 years

David W. Kerr

President and Chief Executive Officer

Age: 48 Employee: 5 years

William G. Deeks

Senior Vice-President

Global Issues

Age: 58 Employee: 35 years

Frank Frantisak

Senior Vice-President

Environmental Services

Age: 58 Employee: 11 years

E. Courtney Pratt

Senior Vice-President

Human Resources and Strategic Planning

Age: 44 Employee: 4 years

Alan R. Thomas

Senior Vice-President, Finance

Age: 49 Employee: 4 years

Bruce C. Bone

Vice-President and Treasurer

Age: 63 Employee: 34 years

Raymond E. Connell

Vice-President

Information Services

Age: 41 Employee: 2 years

Gary H. Corlett

Vice-President and Controller

Age: 58 Employee: 30 years

Bruce H. Grose

Vice-President, Secretary and General Counsel

Age: 63 Employee: 24 years

Frank L. Lederman

Senior Vice-President, Technology

Age: 42 Employee: 3 years

Michel Lefebvre

Vice-President, Quebec

Age: 55 Employee: 29 years

George M. Penna

Vice-President, Taxation

Age: 54 Employee: 17 years

Thomas E. Phelps

Vice-President and Associate Treasurer

Age: 49 Employee: 21 years

Principal Officers of Groups

Mining and Metals

Keith C. Hendrick

Chairman, Noranda Minerals

Alex G. Balogh

President and Chief Executive

Officer, Noranda Minerals

David L. Bumstead

Executive Vice-President Marketing

and Finance, Noranda Minerals

David Goldman

Executive Vice-President

Metallurgical Operations, Noranda Minerals

John M. Gordon

Executive Vice-President

Mining Operations, Noranda Minerals

John C. White

Executive Vice-President

Mine Development and Engineering

Noranda Minerals

Ian D. Bayer

President and Chief Executive Officer

Hemlo Gold Mines Inc.

John Carrington

President and Chief Executive Officer

Brunswick Mining and Smelting

Corporation Limited

John D. Harvey

President

Noranda Exploration Company, Limited

André Y. Fortier

President and Chief Executive Officer

Kerr Addison Mines Limited

Frank G.T. Pickard

President and Chief Executive Officer

Falconbridge Limited

David H. Watkins

President

Minnova Inc.

Eelzie Z. Borders

President

Noranda Aluminum Group

William H. Brooks

President, Noranda Primary

Aluminum Division

Robert W. Johnston

President, Norandex Inc.

John G. Onder

President

American Racing Equipment Inc.

John H. Steadman

President, Norandal USA, Inc.

Roderick L. Henry

Chairman, Wire Rope Industries Ltd.

Forest Products

Adam H. Zimmerman

Chairman, Noranda Forest

K. Linn Macdonald

President and Chief Executive Officer

Noranda Forest

George P. Bell

President, Noranda Forest Recycled Papers

Arkadi G. Bykhovsky

President, Norbord Industries Inc.

Robert B. Findlay

President and Chief Executive Officer

MacMillan Bloedel Limited

C.T. Hazelwood

President, Northwood Pulp and Timber

Limited

Bruce W. Little

President, James MacLaren

Industries Inc.

Niall P. O'Briain

President, Fraser Inc.

C. Lance Skeratt

President, Island Paper Mills Company

Oil and Gas

Paul M. Marshall

Chairman, Oil and Gas

Barry D. Cochrane

President, Norcen Energy Resources Limited

Norman R. Gish

President, North Canadian Oils Limited

John A. Masters

Chairman and Chief Executive Officer

Canadian Hunter Exploration Ltd.

James K. Gray

President and Chief Operating Officer

Canadian Hunter Exploration Ltd.

Significant Investments

Jorge Cano

President, Grupo Industrial Camesa

S.A. de C.V.

Doug Cameron

President, Noranda Enterprises Ltd.

11-year Financial Review

(\$ millions)	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Earnings											
Revenue	8,460	9,565	9,325	8,858	7,366	6,196	5,833	5,548	5,158	4,660	3,029
Expense	8,346	8,788	8,116	7,325	6,303	5,774	5,536	5,221	4,914	4,741	2,752
Interest, net	450	493	290	199	195	269	337	323	249	224	96
Income and production taxes (recovery)	(135)	104	279	452	337	58	3	(23)	(34)	(156)	62
Minority interests in earnings (losses) of subsidiaries	(68)	60	198	277	204	80	28	31	25	(13)	9
Earnings (loss) before unusual and other items	(133)	120	442	605	327	15	(71)	(4)	4	(136)	110
Unusual and other items	—	—	—	(2)	16	28	(183)	—	(29)	57	59
Earnings (loss) after unusual and other items	(133)	120	442	603	343	43	(254)	(4)	(25)	(79)	169
Financial position											
Capital employed:											
Working capital	1,849	2,014	2,278	1,979	1,884	1,135	1,088	1,018	1,146	1,252	867
Investments and advances	1,869	1,763	1,272	1,421	1,398	638	637	792	736	591	1,159
Capital assets	8,528	8,851	8,298	5,855	4,659	4,648	4,739	4,756	4,399	4,427	2,368
Other assets	64	63	91	111	76	90	98	86	73	71	34
	12,310	12,691	11,939	9,366	8,017	6,511	6,562	6,652	6,354	6,341	4,428
Financed by:											
Shareholders' equity	4,304	4,673	4,454	4,079	3,661	2,671	2,359	2,604	2,644	2,740	2,900
Convertible debentures	150	150	150	150	150	—	—	—	—	—	—
Long-term debt*	4,541	4,522	3,805	1,970	1,706	2,355	3,028	2,982	2,606	2,399	922
Minority interests in subsidiaries	2,187	2,175	2,224	2,084	1,577	939	803	749	716	684	210
Deferred taxes, revenues and other	1,128	1,171	1,306	1,083	923	546	372	317	388	518	396
	12,310	12,691	11,939	9,366	8,017	6,511	6,562	6,652	6,354	6,341	4,428
Changes in financial position											
Operations	530	1,007	1,352	1,328	845	534	276	332	234	9	296
Investment activities:											
Property, plant and equipment additions	(771)	(1,300)	(1,526)	(1,155)	(538)	(333)	(413)	(571)	(500)	(885)	(614)
Deferred expenditures	(93)	(107)	(102)	(65)	(73)	(55)	(65)	(80)	(40)	(43)	(84)
Investments, advances and other, net	416	(43)	(1,036)	37	625	234	295	(4)	82	162	(733)
	(448)	(1,450)	(2,664)	(1,183)	14	(154)	(183)	(655)	(458)	(766)	(1,431)
Financing activities:											
Long-term debt (repaid) incurred	195	539	1,522	(50)	(723)	(368)	(16)	280	135	940	197
Issue of convertible debentures	—	—	—	—	300	—	—	—	—	—	—
Issue (redemption) of shares	141	84	246	(20)	282	423	133	80	34	42	1,002
	336	623	1,768	(70)	(141)	55	117	360	169	982	1,199
Dividends paid	(341)	(355)	(348)	(312)	(200)	(153)	(131)	(130)	(120)	(148)	(190)
Cash increase (decrease)	77	(175)	108	(237)	518	282	79	(93)	(175)	77	(126)

Cash comprises cash and securities less bank advances.

*Forward gold sales have been re-classified from deferred revenue to debt for the 1991 and 1990 years.



To receive a copy of the following publications, please complete this postal reply card and mail it to Noranda.

- ☐ Noranda Minerals' Environmental Report
☐ Noranda Forest's Environmental Report
☐ Noranda Employee Magazine featuring Canadian Unity

Language Preference ☐ English ☐ French

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	1986	1985	1984	1983	1982	1981
	0.02	(2.38)	(0.32)	(0.50)	(0.97)	1.37
	0.50	0.50	0.50	0.50	0.75	1.40
	22.00	21.38	27.50	29.38	27.88	36.38
	15.13	13.38	16.50	18.88	11.38	19.38
	20.00	15.63	17.25	26.50	19.50	22.50
	144,664	129,259	128,379	127,488	127,314	126,170
	19,739	5,595	3,583	3,583	3,583	3,583

General Information

Additional copies of this report, or general information, may be obtained by contacting:

Helen Reeves

Corporate Communications
Noranda Inc.

Address on back cover of this report

Telephone: (416) 982-7086

Fax: (416) 982-7423

Investor Information

For investor information, please contact:

Kevin Todd

Investor Relations
Noranda Inc.

Address on back cover of this report

Telephone: (416) 982-7337

Fax: (416) 982-7416

Version française

On peut se procurer la version française de ce rapport en en faisant la demande auprès du service des communications, à l'adresse figurant à la page couverture arrière de ce rapport.

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